FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

FREIGHT TRAFFIC ISSUE

APRIL 2, 1951

42145

33752

YOUNGSTOWN STEEL DOORS

Cover the Continent...

1½ Million in Service

175 Thousand Ordered in 1950

YOUNGSTOWN STEEL DOOR COMPANY

Camel Sales Company
Cleveland Chicago

Camel Company Limited
New York Youngstown

BUFFALO BRAKE BEAM CO. presents—

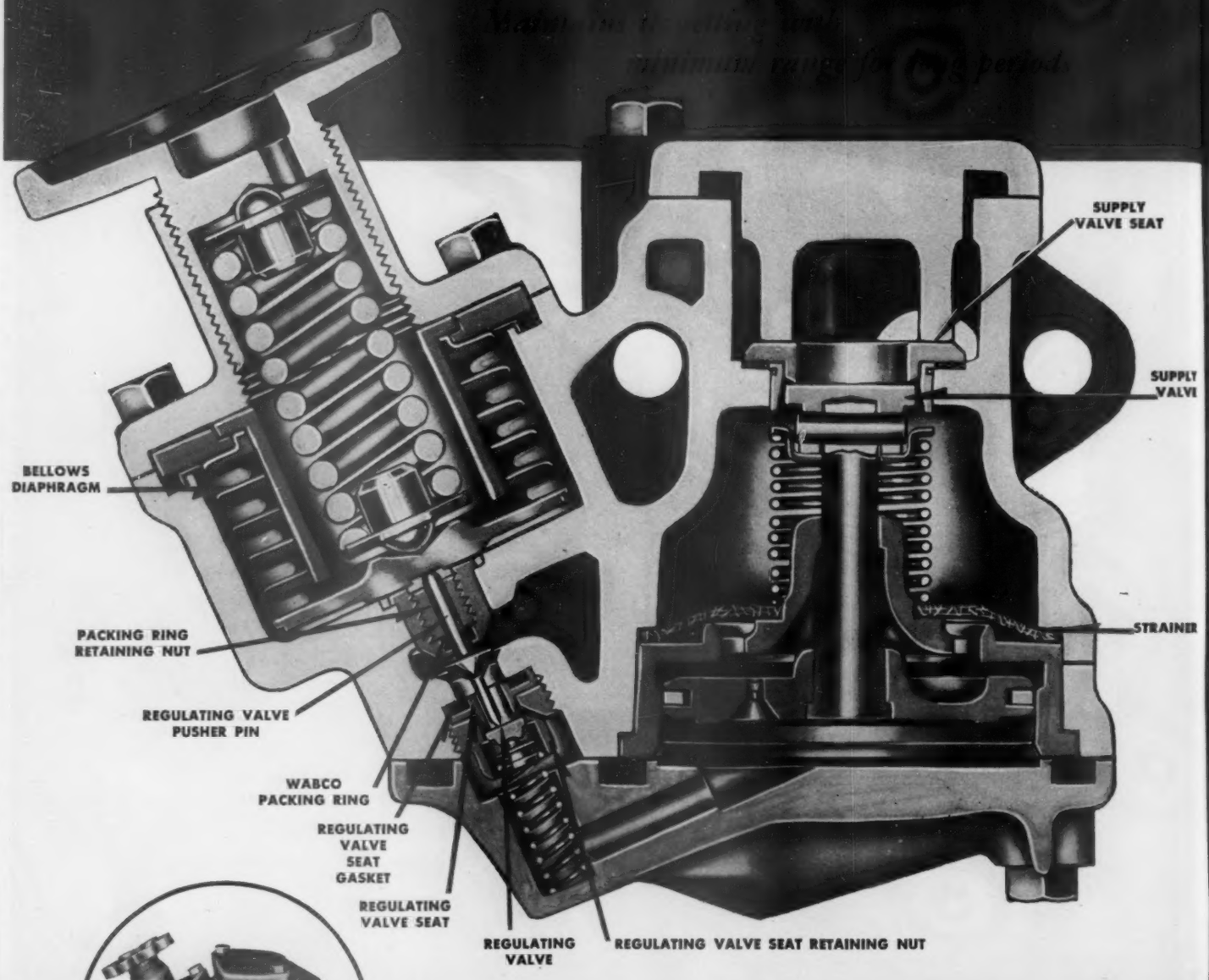
TRUSLOCK

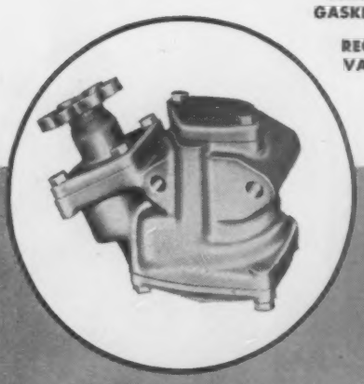
OFF AGAIN—ON AGAIN—in a jiffy

Truslock is the registered trade mark for Buffalo Brake Beam Company's new No. 18 hangered type brake beam (A.A.R. Cert. #64) and is the only brake beam permitting the quick removal and replacement of worn brake heads right at the car. Buffalo Brake Beam Co., 140 Cedar St., New York.

MINER
CLASS A-121-X
FRICTION DRAFT GEAR

W. H. MINER INC. - CHICAGO





For detailed information
ask for Descriptive Catalog No. 2060

Recommended standard for use with both 24-RL and 6-SL locomotive brake equipment. This improved feed valve automatically maintains brake pipe pressure at uniform level for long periods. New features improve performance and extend life. Bellows eliminates variations in setting frequently encountered with clamped diaphragm. Disc regulating valve eliminates stem wear and consequent leakage. Smooth flowing characteristics ban diaphragm hunting. Level flow reduces air turbulence, prevents deposit of suspended oil and carbon.

Westinghouse Air Brake Co.

WILMERDING, PA.

Brakes are Basic to Railroad Progress

Vol. 130, No. 13 April 2, 1951

RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.

Simmons-Boardman Publishing Corporation: James G. Lyne, President. Samuel O. Dunn, Chairman Emeritus. J. S. Crane, Vice-President and Secretary. C. Miles Burpee, Harry H. Melville, C. W. Merriken, John R. Thompson, H. E. McCandless, Vice-Presidents. Robert G. Lewis, Assistant to President. Arthur J. McGinnis, Treasurer. Ralph E. Westerman, Assistant Treasurer.

EDITOR ..... James G. Lyne
EDITORIAL CONSULTANT ..... Samuel O. Dunn
MANAGING EDITOR ..... C. B. Tavenner
WESTERN EDITOR ..... William H. Schmidt, Jr.
NEWS & FINANCIAL EDITOR .... Gardner C. Hudson
WASHINGTON OFFICE . . .
Walter J. Taft Joe W. Kizzia
TRAFFIC & TRANSPORTATION DEPARTMENT . . .
Robert G. Lewis John W. Milliken
John S. Gallagher, Jr.
MECHANICAL DEPARTMENT . . .
C. B. Peck E. L. Woodward
H. C. Wilcox C. L. Combes G. J. Weihofen
ELECTRICAL DEPARTMENT ..... Alfred G. Oehler
ENGINEERING DEPARTMENT . . .
M. H. Dick Henry E. Michael
Norris V. Engman Radford E. Dove
PURCHASES & EQUIPMENT ..... Fred C. Miles
SIGNALING & COMMUNICATIONS DEPARTMENT . . .
John H. Dunn Maurice Peacock
WESTERN NEWS DEPARTMENT .. Arthur M. Cox, Jr.
ASSOCIATE EDITOR ..... Charles Layng
LIBRARIAN ..... Edith C. Stone
EDITORIAL ASSISTANT ..... Elaine C. Farrar

Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price, $3.00 a year to the railroad industry in U. S., U. S. possessions and Canada, payable in advance and postage free. Subscription price to the railroad industry elsewhere in the Western Hemisphere, $10.00 a year; in other countries, $15.00 a year.

Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 79 West Monroe Street, Chicago 3, Ill. Washington 4, D. C.: 1081 National Press Building—Cleveland 13: Terminal Tower—Portland 5, Ore.: Terminal Sales Building—Los Angeles 17: 816 West Fifth Street—San Francisco 4: 1204 Russ Building— Dallas 4: 2909 Maple Avenue.

IN THIS ISSUE

EDITORIAL COMMENT:

Commodity Research a Most Promising Route to Damage Prevention 37
The Railroads' Debt to Metallurgy 39

FREIGHT TRAFFIC SECTION:

Thirty Thousand Weapons Against Loss and Damage, by O. J. Wullstein 40
Riding the Caboose of the "Capital", by Charles Layng 44
G.T.T.M.—The French System of Winning Truck Traffic Back to the Rails..... 46
These Shippers Want Rail Service..... 49
Otis Cleans and Placards Gondolas Too 53
What Can I Do?, by A. H. Schwietert 54
The Case of the Up-Ended Melons 55

GENERAL ARTICLES:

Norfolk and Western Expects Longer Service Life from Crossties 56
Application of Motive Power to Railroad Service, by C. D. Neithamer and T. J. March 59

DEPARTMENTS:

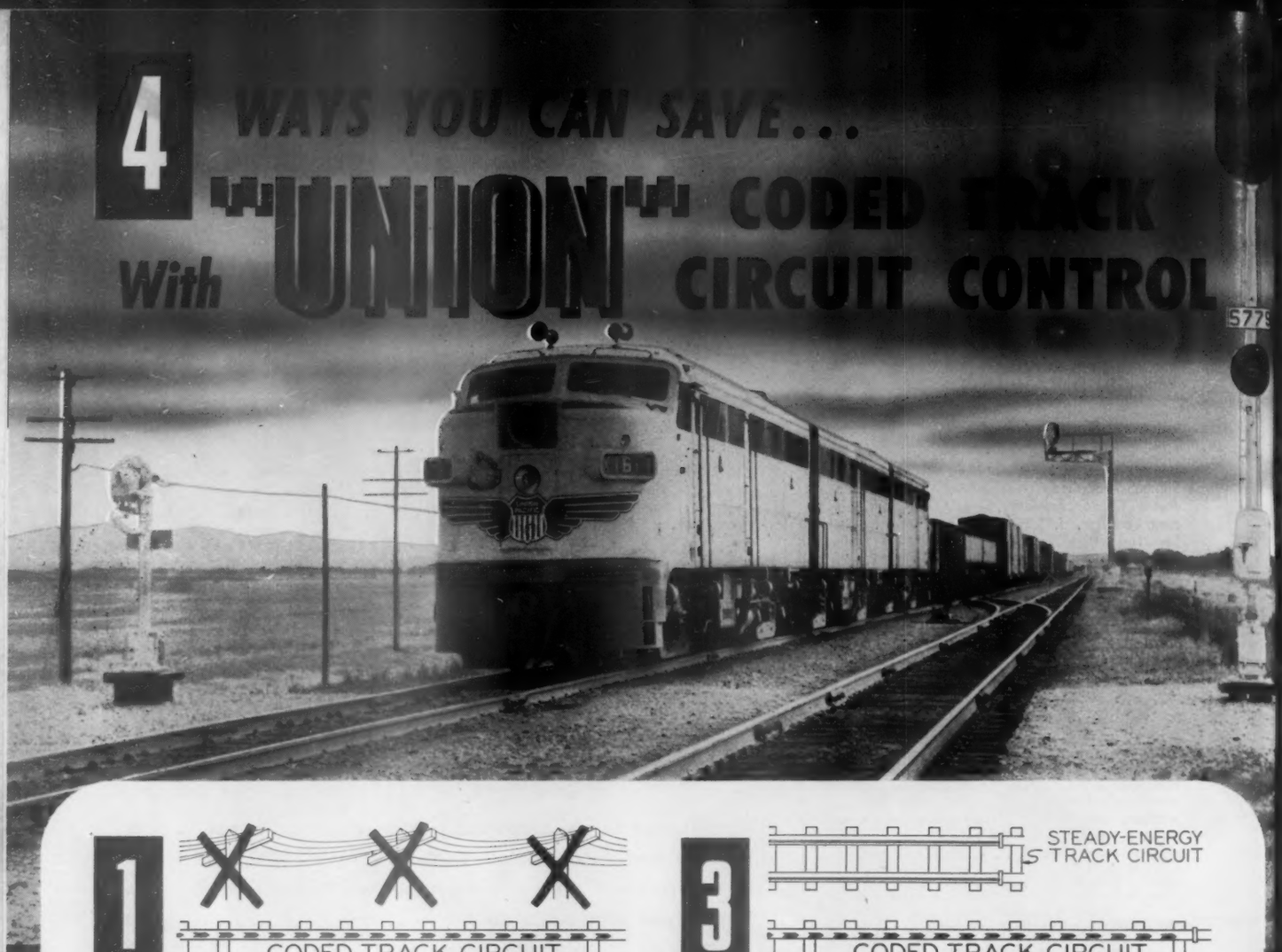
Communication 43
General News 63
Railway Officers 88
Current Publications 106
Freight Operating Statistics 108

Published by SIMMONS-BOARDMAN PUBLISHING CORPORATION, New York 7

Railway Age Railway Mechanical & Electrical Engineer Railway Engineering & Maintenance
Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia
Railway Engineering & Maintenance Cyclopedia American Builder
Marine Engineering & Shipping Review Marine Catalog & Buyers' Directory
Books covering transportation and building

Railway Age is a member of Associated Business Publications (A. B. P.) and Audit Bureau of Circulation (A. B. C.) and is indexed by the Industrial Arts Index and by the Engineering Index Service. Printed in U. S. A.

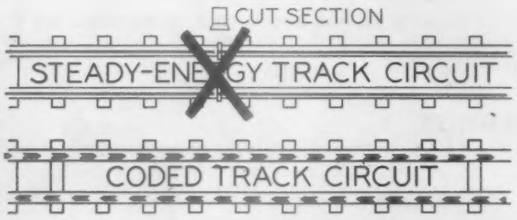
4 WAYS YOU CAN SAVE... With "UNION" CODED TRACK CIRCUIT CONTROL



1

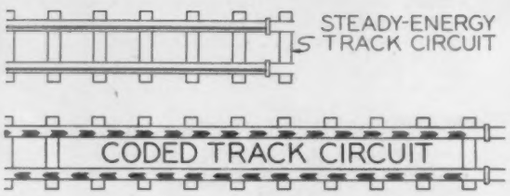
"Union" Coded Track Circuit Control utilizes the track rails for transmittal of signal controls . . . makes it possible for you to reduce, or entirely eliminate, the cost of installing and maintaining line wire.

2



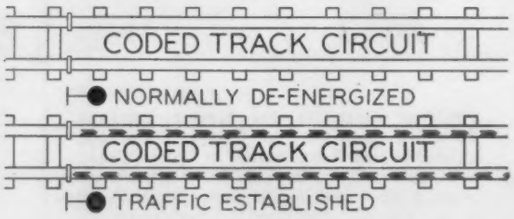
Since Coded Track Circuits can be much longer than those using steady-energy under comparable conditions, there are fewer cut sections to install and maintain.

3



Important battery economies are possible, too, since the much longer Coded Track Circuits usually can be energized with less battery consumption than required for the shorter steady-energy circuits.

4



Normally de-energized Coded Track Circuit Control can be used in light and medium-traffic C.T.C. territories to reduce power requirements substantially.

Remember, too, that while "Union" Coded Track Circuit Control affords these important economies, it also insures greater reliability and safety. Our nearest district office will be glad to give you full details.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

"STRANGULATION": "Workers and shoppers driving into town in their private automobiles are strangling the economic life of the nation's largest business centers." So G. M. Woods, of Westinghouse Electric, recently told a Youngstown, Ohio, audience. Mr. Woods' remarks, reported in the news, were closely parallel with, and add substantial weight to, the statement on New York City's traffic situation by William Reid, president of the Hudson & Manhattan, in that company's latest annual report. (See *Railway Age* of March 19, page 72.)

RAIL SERVICE WANTED: Frequent source of some of life's minor—and sometimes major—tragedies is the failure to appreciate a thing until it is too late. It's been that way in many cases—and still is—with respect to railroad service; the service isn't appreciated until it has been lost, or at least until its loss is seriously threatened. Even then, the belated "appreciation" which sometimes arises is all too often confined to political pressure on regulatory commissions and unfulfilled promises of future traffic. But up in New York state, shippers and businessmen in communities served by the New York, Ontario & Western seem to have awakened in what we hope may be good time to the dangers inherent in the adverse economic forces which have long kept that road in bankruptcy; and have joined with the railroad management in an effort to overcome those forces. The problems the shippers and the railroad are facing together, and what they are doing to overcome them, are outlined in the article which begins on page 49.

LONGER TIE LIFE: Because of the recent installation at its Radford, Va., wood preserving plant of a vapor-drying unit, the Norfolk & Western is anticipating longer service life from its crossties, and many other advantages, which are summarized in the article on page 56. Not the least of the anticipated benefits is a probable reduction in inventory expense and in preserving plant operating costs.

30,000 WEAPONS: A bimonthly magazine—the first issue of which has gone to 30,000 railroad employees, railroad executives and shippers—is the latest innovation in the Union Pacific's unrelenting campaign to cut down loss and damage to freight. What else the U. P. is doing to achieve that goal, and some of the results it has obtained, are told, and the new publication described, by the railroad's general freight claim agent, O. J. Wullstein, in this issue's first feature article (page 40).

G. T. T. M.: It probably couldn't be exactly duplicated in this country—because of the greater territory to be covered if for no other reason—but the description, starting on page 46, of France's "Groupment Techniques des Transporteurs Mixtes" is still interesting reading. And some of its features might well form the basis for adaptations suitable for use over here. Briefly, the article tells how French railways are holding and even winning back, traffic, by combining a working arrangement with an association of truck operators with fast rail movement, unusual tariffs and a novel device for loading truck trailers on flat cars.

MOTIVE POWER APPLICATIONS: A method by which a railroad may accurately predetermine its motive power needs, and forecast the probable return on its capital investment before the locomotives are purchased, is outlined on pages 59-62 by the General Electric Company's C. D. Neithamer and T. J. March.

---

15 PER CENT: By decision of their chief traffic officers, who met at Chicago on March 22 and 23, the railroads have filed with the I. C. C. an amended petition asking for a 15 per cent freight rate increase. Details of their new request are given in the news.

NEWS HIGHLIGHTS: Summary of March equipment orders shows total of 526 diesel units, 11,931 freight cars, and 64 passenger cars, costing estimated total of $166 million.—Senator McMahon asks investigation of New York, New Haven & Hartford as B.R.T. official protests retirement of J. Frank Doolan, executive vice-president.—L. V. extends truck service to 50 stations in western New York state.—Reading to modernize eastbound yard at Rutherford, Pa.—B. & O. inquires for 2,500 freight cars as Grand Trunk Western orders 550 more.—Loomis ends Senate testimony on wage case as "escalator" clause in "non-op" agreement gets involved with stabilization program.—Vore succeeds Plowman as M.T.S. director.—I.C.C. looks into free transportation of farm contest winners and for publicity purposes.—Gass reports seventh consecutive monthly gain in serviceable freight car ownership.—International rates increased in Canada.—I.C.C. approves Long Island speed control plan.—Teamsters, calling truck regulation "lax" oppose Rogers' reappointment to I.C.C.

STEEL: June steel allocations, apparently now definitely established, will reportedly permit construction in that month of 10,050 freight cars—850 tank cars and 9,200 of other types.

"BREAK" IN FRONT? What may—or may not—be the first real "break" in wage negotiations between the railroads and the operating brothers came at Chicago when the Indiana Harbor Belt announced a 27-cent increase agreement with the B. of L. F. & E. The agreement, which is covered in the news section, is reliably said to be the same as that offered by the carriers on a national basis. The I. H. B. may soon, it is reported, reach similar agreements with enginemen and trainmen.

Unicel

Stronger, lighter by 45%, larger and more durable than conventional steel freight cars, UNICEL is more versatile, has a greater earning capacity, is more economical to buy, operate and maintain!

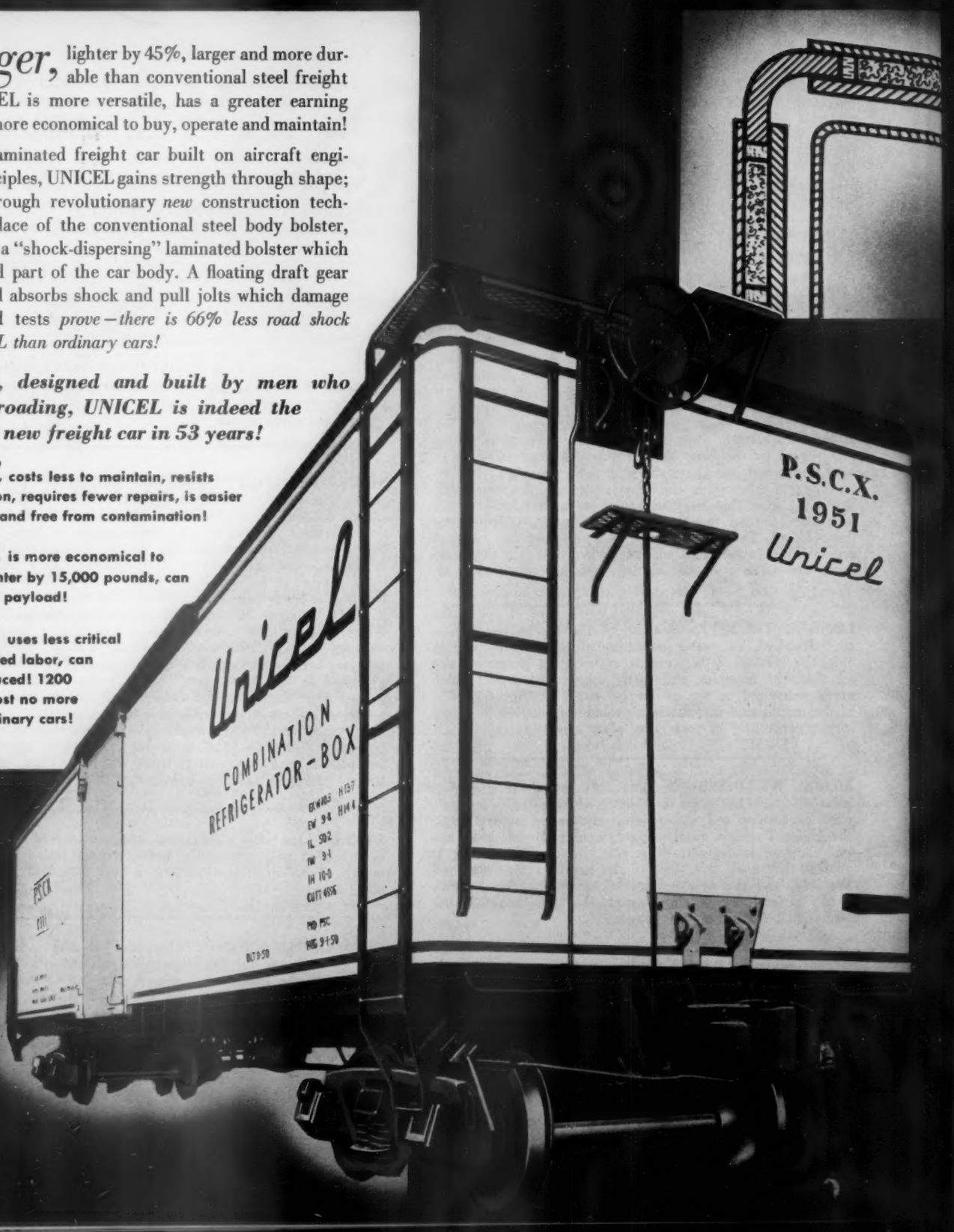
A cellular laminated freight car built on aircraft engineering principles, UNICEL gains strength through shape; lightness through revolutionary *new* construction techniques. In place of the conventional steel body bolster, UNICEL has a "shock-dispersing" laminated bolster which is an integral part of the car body. A floating draft gear cushions and absorbs shock and pull jolts which damage lading! Road tests *prove—there is 66% less road shock with UNICEL than ordinary cars!*

Conceived, designed and built by men who know railroading, UNICEL is indeed the first really new freight car in 53 years!

Unicel **costs less to maintain, resists corrosive action, requires fewer repairs, is easier to keep clean and free from contamination!**

Unicel **is more economical to operate, is lighter by 15,000 pounds, can carry a 65 ton payload!**

Unicel **uses less critical steel, less skilled labor, can be mass produced! 1200 UNICEL cars cost no more than 1000 ordinary cars!**



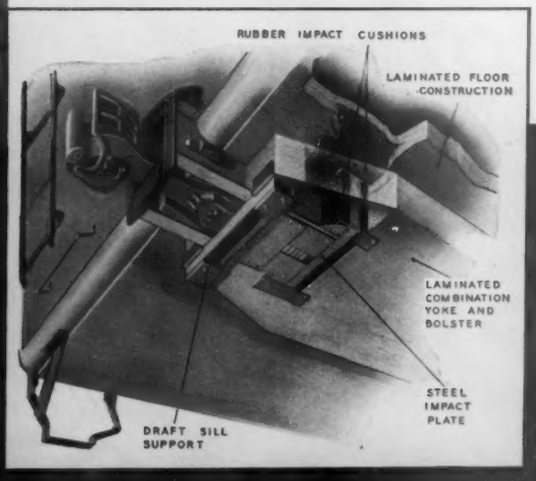
Unicel A FREIGHT CAR OR A REFRIGERATOR CAR!

By the simple addition of insulation, an inner wall and a mechanical refrigerating unit, UNICEL quickly converts from a freight car to UNITEMP—a refrigerator car with 75% more capacity than a 40 foot car of comparable weight, and superior in every way to the average refrigerator car now used by the railroads.

We proved it! In a special "Death Valley Laboratory", tests were run continuously for seven weeks to study moisture vapor passage and condensation. A 100,000 watt oven capable of reproducing abnormal summer heat achieved skin temperatures in the car in excess of 165 degrees!

UNITEMP passed all tests with flying colors; proved beyond doubt that it can maintain a more uniform temperature; keep condensation and dehydration to a minimum.

- **Temperatures between 0°F and 55°F can be maintained as long as desired!**
- **Stops for re-icing are unnecessary!**
- **Two mechanical refrigerating units offer 100% security!**
- **Costs less than conventional refrigerator cars!**



Why BECCO ships hydrogen peroxide in tank cars of Alcoa Aluminum

It was natural for Buffalo Electro-Chemical Company to use aluminum tank cars. Long ago they found they could protect hydrogen peroxide from decomposition by using aluminum in their plants for tanks and other equipment. So they knew they could count on aluminum tank cars for safe shipment of this commodity.

Like BECCO, shippers of many other valuable ladings choose aluminum tank cars for two reasons:

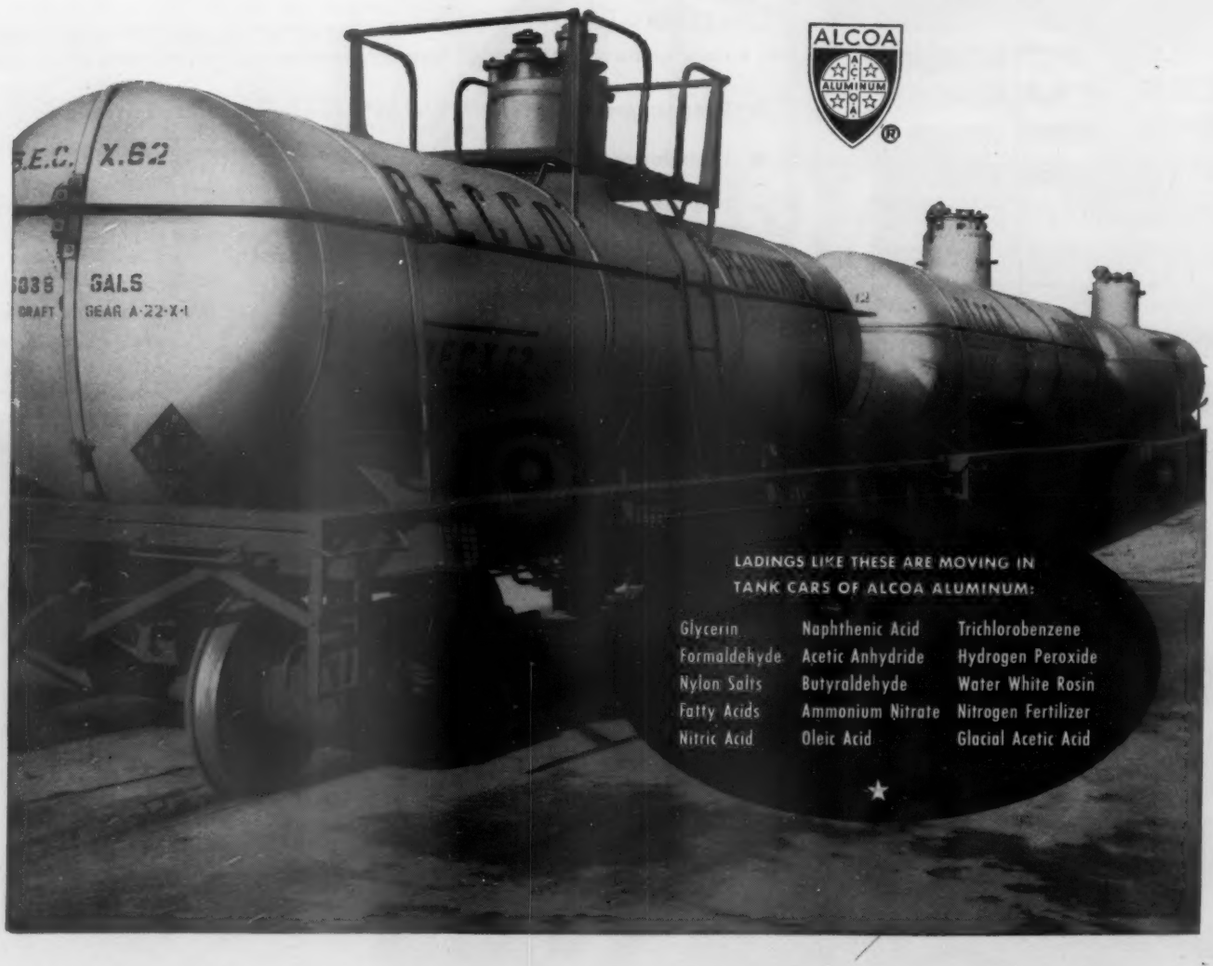
NO DAMAGE TO LADINGS—Aluminum does not contaminate or discolor sensitive liquids, does not promote decomposition.

NO DAMAGE TO CARS—Many acids and other corrosive ladings have no effect on aluminum. Far less painting and maintenance required.

Although military needs may delay your purchase or lease of aluminum tank cars, wouldn't it be worth while to get full information now? Ask your car builder. Or write ALUMINUM COMPANY OF AMERICA, 1816D Gulf Bldg., Pittsburgh 19, Pa.

ALCOA

First in Aluminum



Once Again BAKER Makes Industrial Truck History!

THE NEW BAKER TYPE FS

2000 pound FORK TRUCK

This Rugged ALL NEW 2000 pound capacity FORK TRUCK combines OUTSTANDING DEPENDABLE PERFORMANCE with LOW FIRST COST, LOW OPERATING COST and MINIMUM MAINTENANCE!

In 1950 when we introduced the new 100% Functional Type FT-3000 and 4000 pound Fork Truck, we said it would do *more work per dollar invested than any other truck in its class.*

HUNDREDS OF USERS AGREE THAT IT HAS MORE THAN LIVED UP TO OUR CLAIM!

Now Baker announces the *Type FS,* with the same *completely functional* design, in the 2,000 pound class. If you have a material handling problem for trucks in this capacity — it will pay you to get all the facts.

Write for Bulletin 1327

Compare These Features!

POWER EFFICIENCY! Baker-built motors for travel, hoist and tilt develop the highest horsepower for any motors of their size and weight.

LOWER MAINTENANCE, GREATER SAFETY! Dynamic-braking, NoPlug Controller, operated by accelerator pedal, saves wear and tear on motor, drive axle, service brake and tires.

TROUBLE-FREE TRANSMISSION! Efficient worm-drive power axle minimizes gear losses and reduces maintenance.

MAXIMUM MANEUVERABILITY, SMOOTHER RIDING! Baker patented wide-angle steering axle is mounted longitudinally in jumbo-size rubber blocks accommodating it to uneven roadways, and absorbing shock from rough floors.

SAFE, TIRELESS OPERATION! Automotive-type steer, soft-touch brake, cushion tires, greater visibility for operator.

HYDRAULIC LIFT AND TILT! Low-pressure hydraulic system for lift and tilt motions, increases safety and minimizes seepage.

RUGGEDNESS AND STAMINA! All-welded steel truck frame with integral bumper counterweight. Most efficient structural design for strength and utilization of space.

BAKER INDUSTRIAL TRUCK DIVISION *of The Baker-Raulang Company*

1255 WEST 80th STREET, CLEVELAND 2, OHIO • *In Canada: Railway & Power Engineering Corporation, Ltd.*

Baker® INDUSTRIAL TRUCKS

B & O's Fast Freight "Sentinel Service"

WINS TONNAGE BACK TO THE RAILS

From Philadelphia, west to Willard, Ohio on the route to Chicago, the B & O's crack "Sentinel Service" trains are breaking records for fast and reliable service. Through accurate scheduling, customers receive siding-to-siding dependability, know the exact time the goods will be delivered.

Providing the speed for heavily-loaded "Sentinel Service" trains—and also for the "Time Saver," the LCL freight train that has cut schedules one-third—are Alco-GE diesel-electrics. *And they're serving a dual purpose,* for many of them are equipped with steam generators to haul main line passenger trains.

The results are self-evident. The B & O has proved that competition can be overcome with dependable, efficient service. Their new fleet of Alco-GE "1600's" has power to move freight trains at express speeds, and can also be assigned to mainline passenger service. Here's real earning power at work!

AMERICAN LOCOMOTIVE
and
GENERAL ELECTRIC

113-255

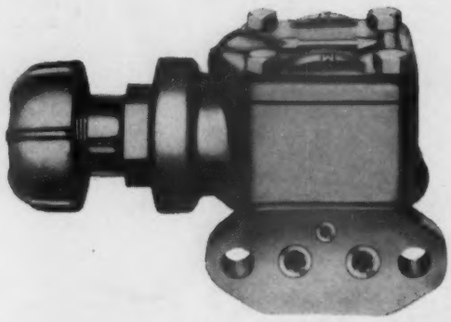
810
B&O

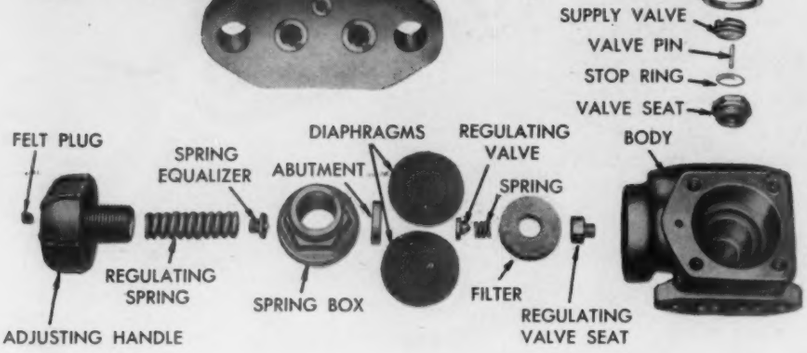
Here's What F-6 Means

New!

F-6 FEED VALVE

For the most uniform and accurate control of brake pipe pressure.





● It means the most accurate and uniform control of brake pipe pressure.

The new F-6 Feed Valve maintains less than 1 pound range.

● It means extended periods of low range performance.

The new F-6 Feed Valve is designed for trouble-free operation between cleaning periods of air brakes on any locomotive

● It means universal adaptability to locomotive brake equipments.

The new F-6 Feed Valve is designed to replace and out-perform any brake pipe feed valve in common use on locomotives.

● It means increased capacity.

The new F-6 Feed Valve, though calibrated for maximum needs, is small and compact for ease of installation.

● It means simple and inexpensive maintenance.

The new F-6 Feed Valve is easy to dismantle, clean, and assemble. The few critical parts are rugged and easily replaceable.

Ask for Instruction Pamphlet No. 64

The New York Air Brake Company

420 Lexington Ave., New York 17, N.Y. Plant: Watertown, N.Y.

HOW HARD WILL IT HIT?

• FORCES TRANSFERRED TO CAR STRUCTURE •

AT 2 M.P.H.

100,000 LBS. WITH CONVENTIONAL DRAFT RIGGING

LESS THAN 50,000 LBS. WITH DURYEA CUSHION UNDERFRAME

AT 3½ M.P.H.

200,000 LBS. WITH CONVENTIONAL DRAFT RIGGING

LESS THAN 63,000 LBS. WITH DURYEA CUSHION UNDERFRAME

AT 5 M.P.H.

500,000 LBS. WITH CONVENTIONAL DRAFT RIGGING

LESS THAN 80,000 LBS. WITH DURYEA CUSHION UNDERFRAME

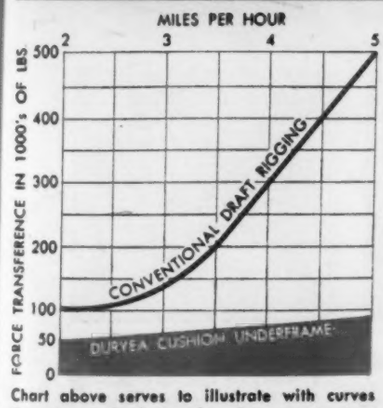


Chart above serves to illustrate with curves the rate of shock transferred to car structure at 2, 3½ and 5 miles per hour with conventional draft rigging as compared with Duryea Cushion Underframe.

The function of any car cushioning device is to so dissipate the shock forces of impact that the irreducible minimum of these forces is transferred to car structure and lading.

The degrees of shock transference with conventional draft rigging and with Duryea Cushion Underframe is depicted in the chart above. Note that at 5 miles per hour, the shock transference on Duryea equipped cars is but 16% of that for conventional cars. And bear in mind, too, that check tests of a carefully controlled hump yard* showed that 40% of the coupling impacts in this yard were at 6 miles per hour or higher.

What more convincing argument than these hump-yard check figures for equipping all freight cars to provide the extra protection of shock force control?

To safeguard cars and protect lading, specify Duryea Cushion Underframe on your next freight car order.

* See RAILWAY AGE November 4, 1950

HULSON CO. • 332 SOUTH MICHIGAN AVENUE CHICAGO 4, ILLINOIS

duryea

cushion underframe

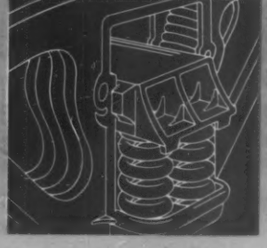
THE SILL MOVES WHILE THE CAR STANDS STILL

Recognize a C-1 when you see one

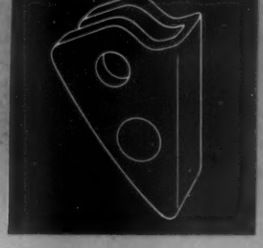
Six big advantages make National C-1 Lading-Conscious Trucks outstanding

National C-1 trucks are easy to spot because you can inspect them at a glance. And simplified inspection is only one of many construction advantages built into each C-1 truck. Check these advantages yourself:

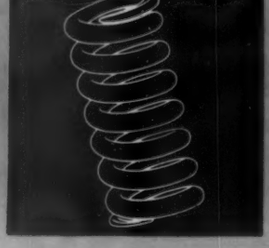
A-2851



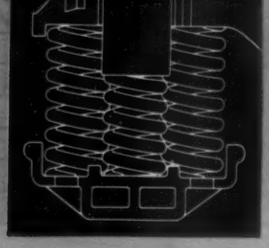
1 FULL VIEW of friction control mechanism in side frame gives immediate assurance that snubbing mechanism is functioning properly. No time delays, no costly handling, no parts to be removed.



2 WEDGES ARE RUGGED high strength castings uniformly heat-treated throughout to provide longer wear life. Convex surface has full-width bearing on side frame; flat surface bears on hardened steel bolster wear plate.



3 NATIONAL'S WEDGE SPRINGS are cold-wound, shot peened, low stressed and low rate to insure long life.

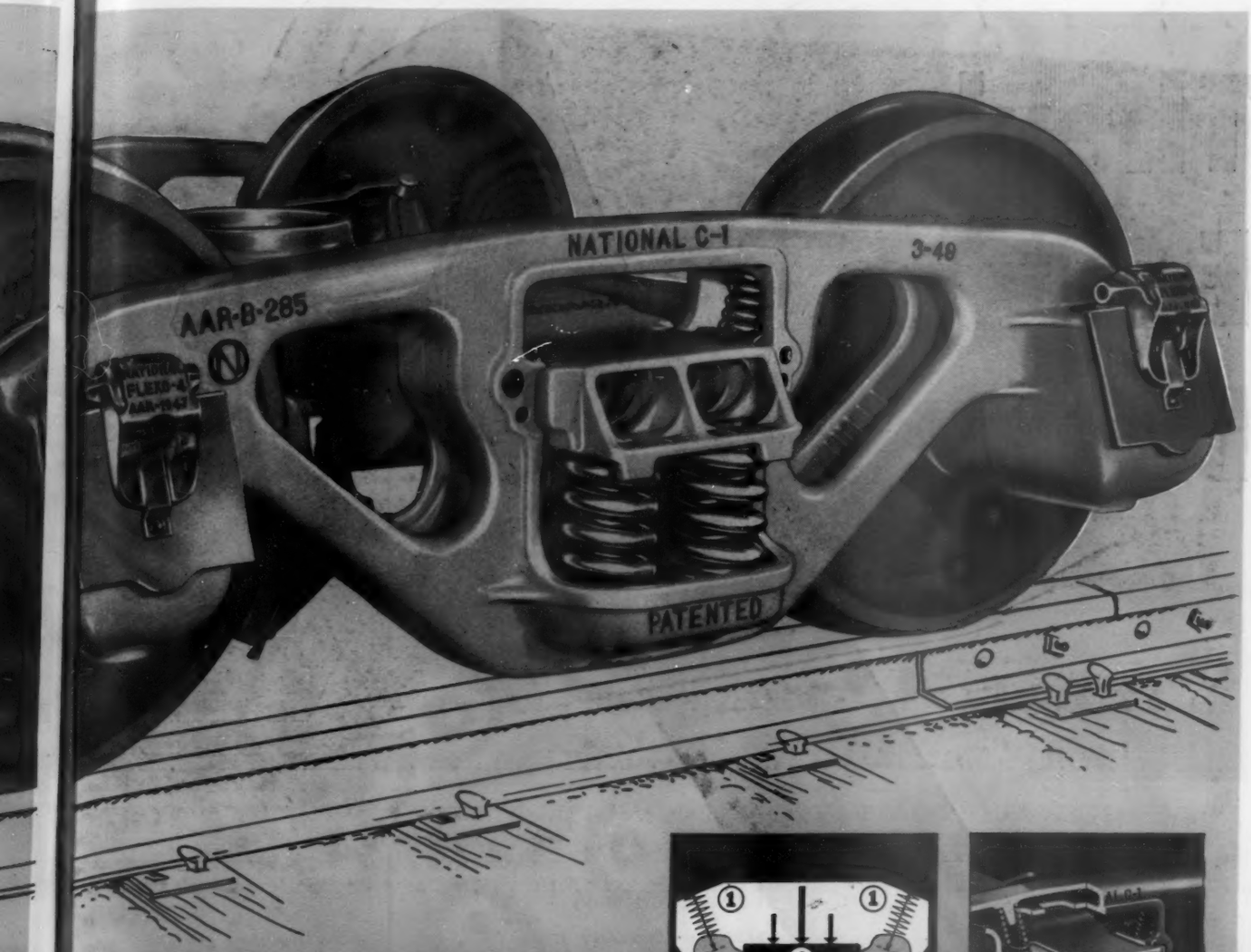


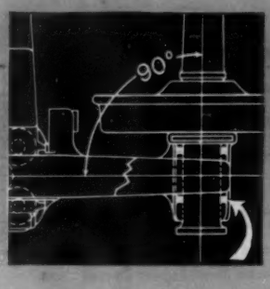
4 CHOICE OF SPRING DEFLECTIONS. C-1 trucks use A.A.R. Alternate Standard long-travel spring groups with 2½", 3 1/16" and 3 11/16" deflection . . . springs of 4" deflection may be used if desired.

Write for National C-1 Truck Circular No. 5150.

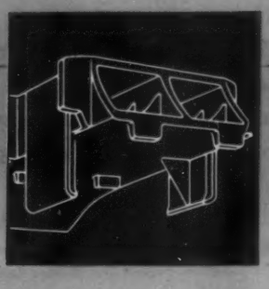
NATIONAL MALLEABLE and STEEL

COUPLERS • TRUCKS • YOKES • DRAFT GEARS

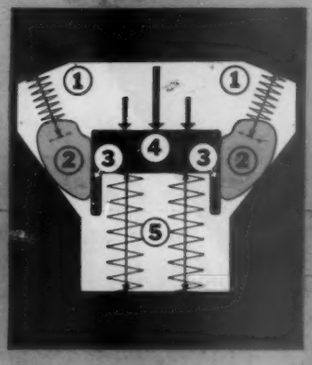


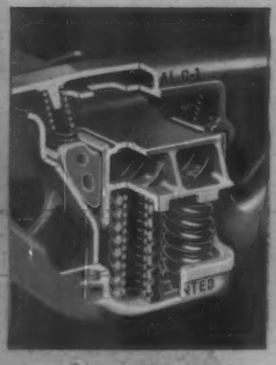


5 JOURNAL BEARING LUG PROTECTION. Four journal bearing wedge aligning lugs in each journal box limit truck unsquaring, preventing breakage of journal bearing lugs.



6 FULL BOX-SECTION BOLSTER . . . Friction mechanism in side frame controls both lateral and vertical motion . . . permits full box-section bolster of maximum torsion and bending resistance.





INSIDE STORY OF A "LADING-CONSCIOUS" RIDE. Constant pressure of wedge springs (1) forces friction wedge (2) down side frame against bolster wear plates (3), providing friction to control the vertical and lateral oscillations of the supporting springs. Car floats on full box-section bolster (4) & standard spring groups (5).

The National Malleable and Steel Castings Company, Cleveland 6, Ohio

CASTINGS COMPANY

JOURNAL BOXES AND LIDS

NATIONAL *Products*
FOR TRANSPORTATION AND INDUSTRY
M&S Co. Est. 1868

They're Easy to Drive

Bethlehem Track Spikes save time on the job because their sharp points are designed for fast, true driving. They meet virtually every need, too, because they can be made to railroad specifications in any size.

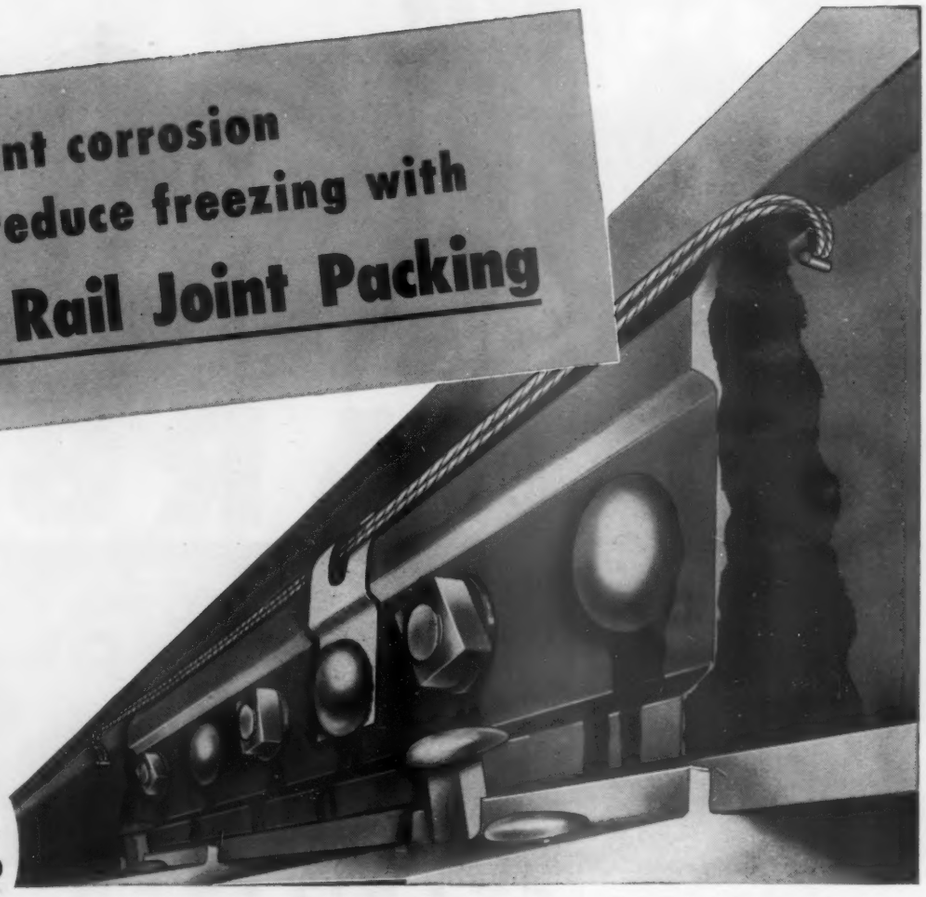
BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

Bethlehem supplies every type of Railroad Fastener

prevent corrosion reduce freezing with R·M·C Rail Joint Packing



New RMC Rail Joint Packing — the result of years of experience and recent intensive research is now available.

The compound of graded expanded Vermiculite, heavy lubricating oil and inhibitors makes a perfect joint packing. Vermiculite, inert chemically, non-hygroscopic, has anti friction qualities equal to graphite.

Oil is retained over a long period, and any small amount of moisture present is neutralized by a special combination of inhibitors.

RAILWAY MAINTENANCE CORP.

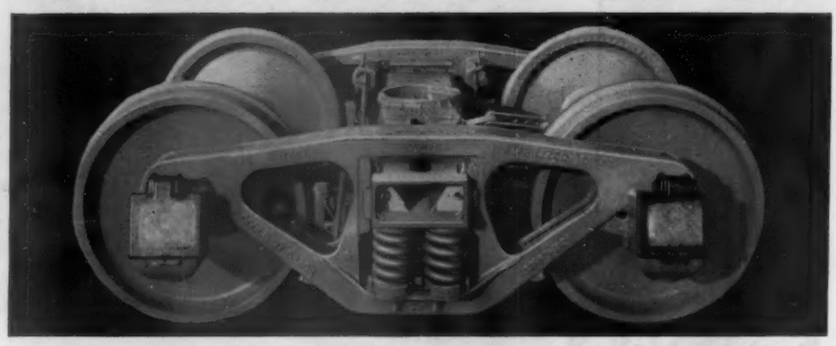
PITTSBURGH 30, PENNSYLVANIA

OVER

50,000 CAR SETS

ORDERED IN 1950!

BARBER



STABILIZED TRUCK

MORE THAN A

QUARTER MILLION

CAR SETS DELIVERED OR ON ORDER!

5383

STANDARD CAR TRUCK COMPANY

332 SOUTH MICHIGAN AVE., CHICAGO, ILL.

STOP SPOILAGE LOSSES

protect lading from freezing

with

LUMINATOR-MITCHELL

underslung

REFRIGERATOR CAR HEATER

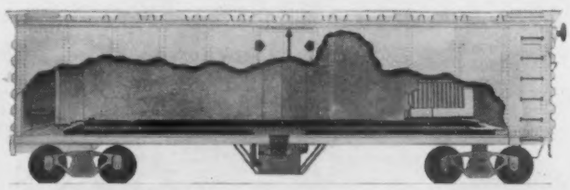
Don't rely on halfway measures!—protect your shipment of perishables no matter how cold weather conditions may be. Luminator-Mitchell Underslung Refrigerator Car Heaters have amazed shippers and carriers with their record for keeping produce in perfect condition through the coldest weather.

The problem of maintaining uniform temperatures is solved by the Luminator-Mitchell Underslung Refrigerator Car Heater by introducing heat under the load to rise by natural convection through the entire lading. Eliminates wide differences in top and bottom temperatures. It has been in service during the severest winter experienced in many years—eliminated heavy claims from freezing damage or overheating in cars. Safe, economical and trouble-free. Write for further information to...

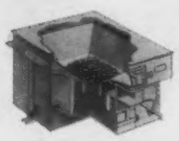
LUMINATOR INC.

Marine and Railway Devices Division

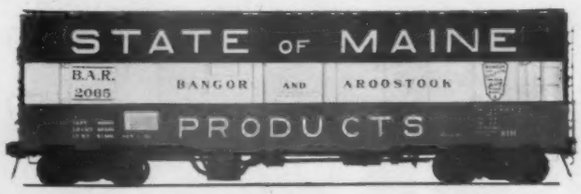
50 CHURCH STREET, NEW YORK 7, N.Y. · WEST COAST OFFICE: 15326 WYANDOTTE STREET, VAN NUYS, CALIFORNIA
HOME OFFICE: 120 N. PEORIA STREET, CHICAGO 80, ILLINOIS



The above diagram shows how the heater is installed in standard end bunker refrigerator cars as an integral part of the car. Warm liquid indicated in red on diagram circulates thru pipe in car and back to heater to be re-warmed. Rate of burning fuel in the heater is accurately controlled by unique damper arrangement.



Cutaway view of heater showing efficient coil heating and fuel burning system.



Protection on the Bangor and Aroostook

Faced with the problem of providing cars for its seasonal potato loading, as well as cars for general freight lading, the Bangor and Aroostook Railroad, in cooperation with the Magor Car Corp. and Luminator, Inc., applied Luminator-Mitchell Underslung Heaters to these new cars. Maine shippers thus can be assured of safe delivery free of the costly damage that results from freezing or overheating.

KEEPS A CARLOAD A PAY LOAD

LONG exceptionally

Exide-Ironclad
DIESEL-CRANKING BATTERIES

The exclusive features that give Exide-Ironclad Batteries an exceptionally long life, provide the economies of low depreciation and infrequent replacements. They also provide these other qualities so essential in a Diesel-cranking battery:

QUICK BREAKAWAY and fast acceleration of engine to firing speed.

HIGH POWER RESERVE at all times for positive operation of control equipment.

LOW COSTS of operation, upkeep, repair.

EASE OF MAINTENANCE—also easy to change and keep charged.

RUGGED CONSTRUCTION for hard, continuous use.

INHERENT SAFETY — freedom from hazards of fire or disruptive breakage; plus clean, quiet, vibrationless operation.

INTERCHANGEABLE SIZES—reducing number of spare batteries required.

These and other qualities combine to make Exide-Ironclad the best battery buy . . . at any price.

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 2
Exide Batteries of Canada, Limited, Toronto

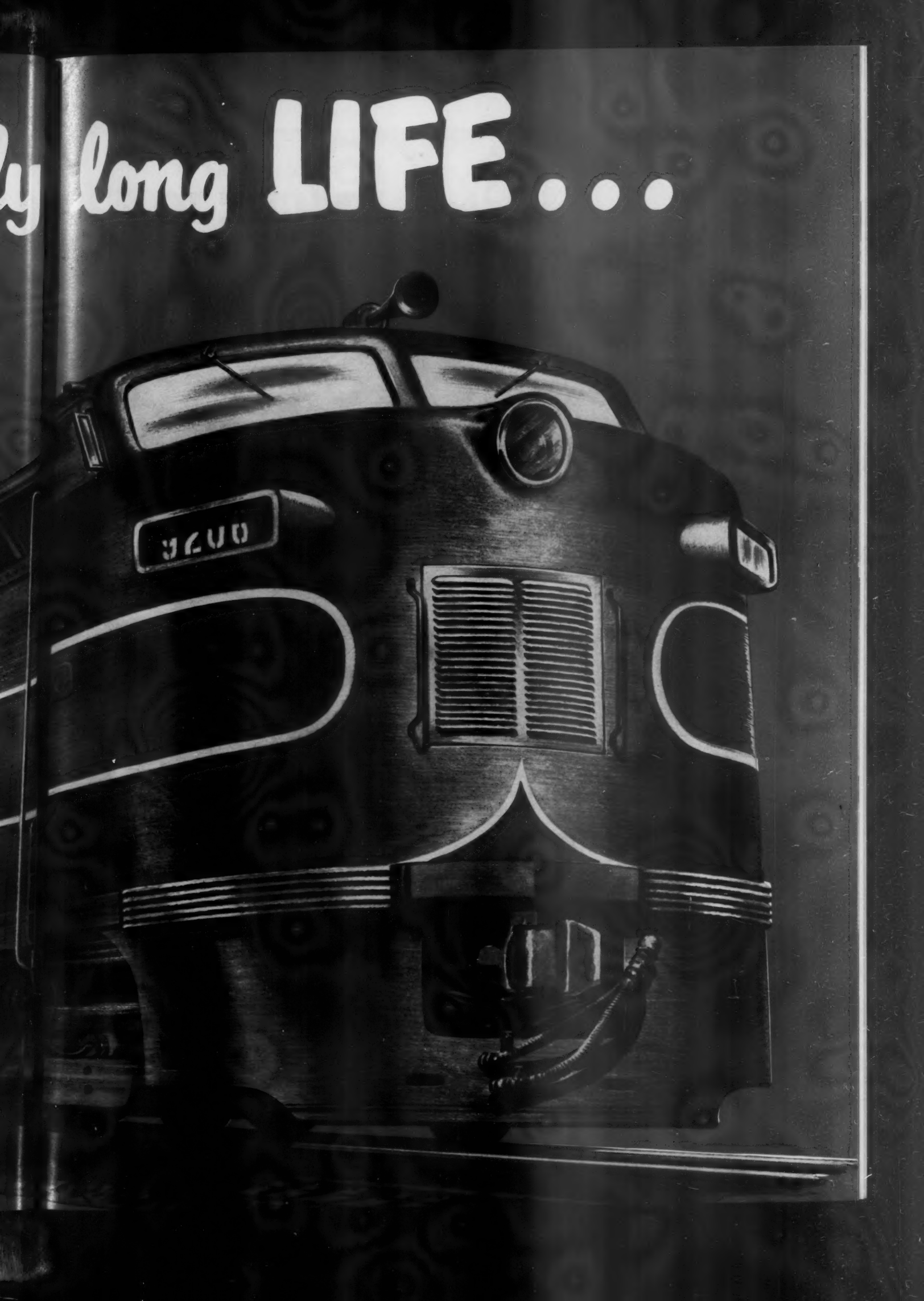
"Exide-Ironclad" *Reg. Trade-mark U. S. Pat. Off.*

1888 . . . DEPENDABLE BATTERIES FOR 63 YEARS . . . 1951

◀ Type MV-17-D Exide-Ironclad Battery—284 ampere hours—for cranking switching locomotives of 600 hp. and larger.

Type MV-25-D Exide-Ironclad Battery—426 ampere hours—for cranking road locomotives of the larger sizes. ▶

WHEN IT'S AN EXIDE-IRONCLAD YOUR DIESELS START


ly long LIFE...

Continuous research and development at AMCRECO

Means lower maintenance cost here!

Amcreco
Lowry Process
Creosoted Products

The ever increasing life expectancy of Amcreco Creosoted Products is no accident. It is the direct result of continuing research and development at Amcreco. With the tried and proven Lowry pressure creosoting process as the foundation, refinements and improvements in treatment techniques have in many instances doubled and even tripled service life in the space of the last 25 years.

Backed by this progressive program, Amcreco Creosoted Products are your best assurance of long life and minimum maintenance. For greater all-around economy on your next job, specify Amcreco.

- Adzed and Bored Cross Ties
- Bridge Ties
- Piles
- Timbers

AMERICAN CREOSOTING COMPANY
INCORPORATED
COLONIAL CREOSOTING COMPANY
GEORGIA CREOSOTING COMPANY
LOUISVILLE, KENTUCKY

Pressure-treated for strength that lasts!

COLOR-STYLED
FOR BETTER
PUBLIC RELATIONS

...2 good reasons for specifying SHERWIN-WILLIAMS STATION PAINTS!

Good paint pays off two ways in railway station maintenance—in protecting investments, and in improving local "good neighbor" relationships. Sherwin-Williams Station Paints are specifically developed to meet both important requirements.

*"Weatherated"**—six characteristics involved in the weathering of exterior paints have been carefully predetermined, balanced and controlled for best results under the types of exposure encountered with railway stations. WEATHERATING protects against excessive loss of gloss; high dirt collection; uncontrolled chalking; checking and cracking; rapid erosion and color fading.

Color Styled—Sherwin-Williams Station Paints are supplied either in colors harmonizing with the environment of neighborhoods in which your stations are situated, or to meet your own color specifications.

Ask for help in selecting your requirements—specify Sherwin-Williams for two-way benefits in application! The Sherwin-Williams Co., Transportation Division, Cleveland 1, Ohio.

*A continuous laboratory testing procedure that dictates and controls the brass knuckle abilities of S-W Station Paints to fight off deterioration, decay and early repainting.

SHERWIN-WILLIAMS
RAILWAY FINISHES
Products of Sherwin-Williams Research

ACCURACY, DEPENDABILITY

Proved by Millions of Miles of Service!

The accuracy and dependability of BARCO RECORDERS are unquestioned. A typical user* reports accuracy within 2% at 100 MPH after a million miles of service! This is the kind of performance you want and one reason why you should INSIST ON GETTING BARCO RECORDERS.

There are other equally important reasons. BARCO gives you the dependable, accurate records you need to insure efficient, profitable, safe operation of your equipment. When you consider the investment required for a locomotive, it does not pay to economize on instruments. BARCO RECORDERS HELP YOU GET THE MOST OUT OF YOUR INVESTMENT! *Let Barco give you the facts—ask for new catalog.* BARCO MANUFACTURING CO., 1800 E Winnemac Ave., Chicago 40, Ill.

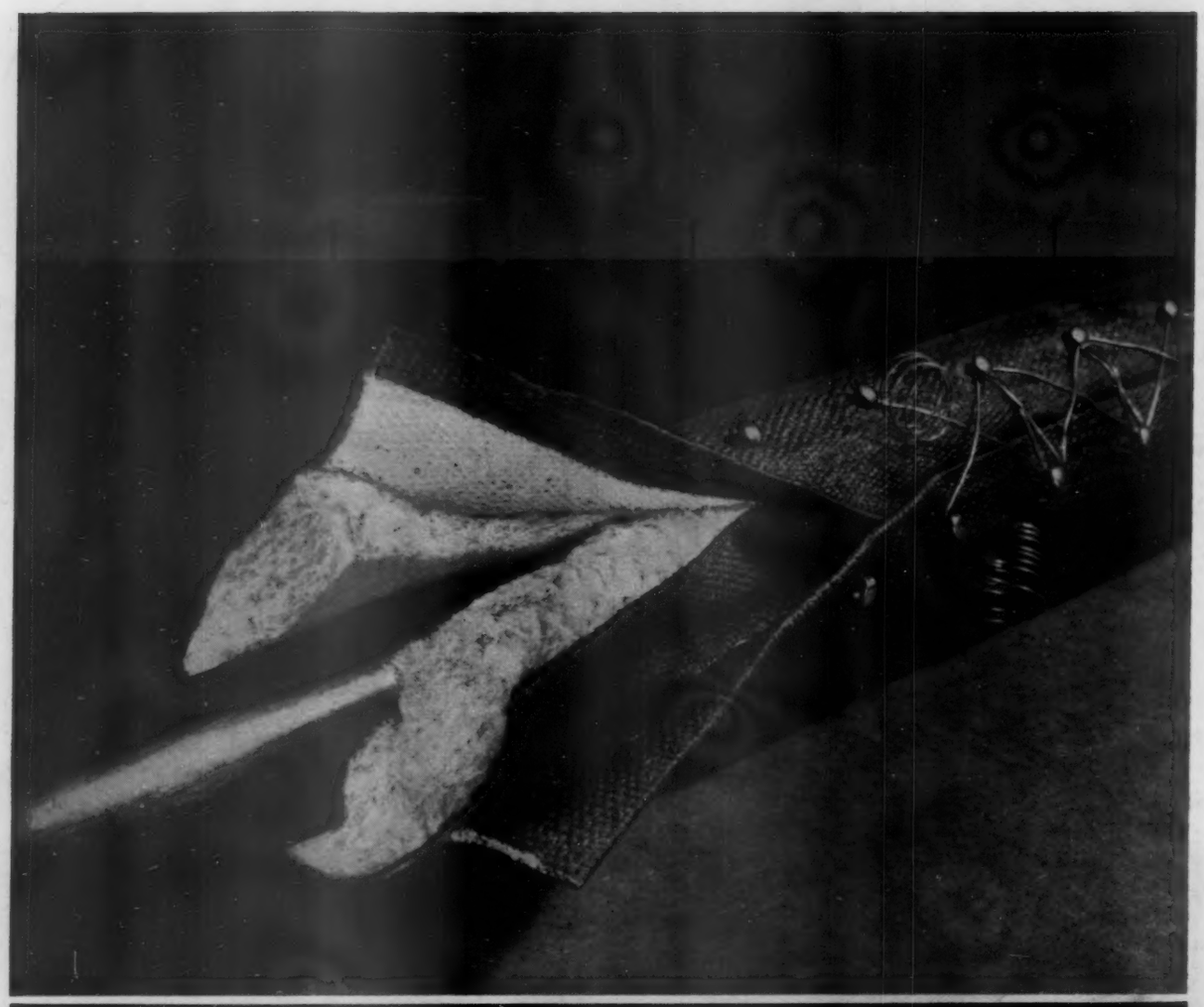
**Name on request.*

BARCO RECORDERS

SPEED RECORDERS
SPEED INDICATORS
DIESELOMETERS
SWITCH ENGINE RECORDERS

FREE ENTERPRISE—THE CORNERSTONE OF AMERICAN PROSPERITY

for
extra-protection of your
"extra-fare" freight... SCULLIN TRUCKS
LATERAL VERTICAL
CUSHIONED MOTION
the smoothest
traffic-builder
between
LCL
and your
rails
SCULLIN-V-50 TRUCK
STEEL CASTINGS MANUFACTURER
NEW YORK
CHICAGO
CLEVELAND
BALTIMORE
RICHMOND, VA.
SCULLIN STEEL CO.
SAINT LOUIS 10, MISSOURI



UNARCO WOVENSTONE®

Lace-on Train Pipe Insulation

Contributing to passenger comfort on the nation's trains for more than 25 years—Wovenstone is recognized for its high insulating efficiency, rugged construction and long life. These qualities are reflected in the lower cost of delivering steam heat and hot water to the cars. The longer the train, the greater the need for Wovenstone.

UNARCO

UNION ASBESTOS & RUBBER COMPANY

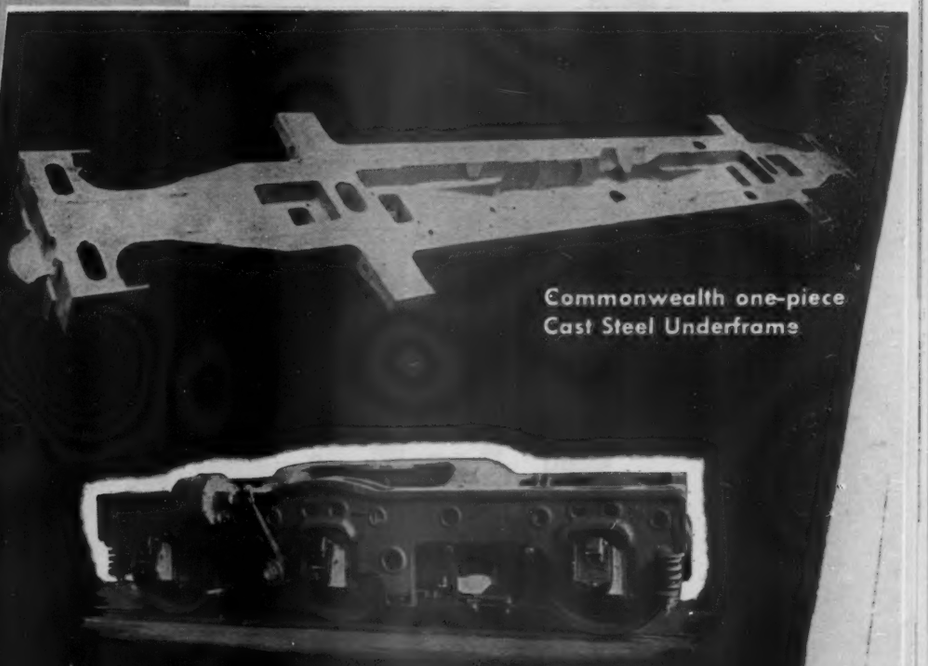
332 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS

COMMONWEALTH

CAST STEEL UNDERFRAMES

AND MOTOR TRUCKS

For Diesel Locomotives



Commonwealth one-piece Cast Steel Underframe

Commonwealth 6-Wheel Truck Arranged With Three Traction Motors

Assure

- Great Strength
- Low Upkeep Cost
- Dependable Performance

Baldwin-Westinghouse
1500 H. P. Diesel Road Switcher

For every type of Diesel—passenger, freight or switcher—COMMONWEALTH trucks for many years have proven their outstanding dependability and maintenance economy. They provide minimum weight with exceptional strength.

The one-piece cast steel construction of COMMONWEALTH underframes provides great inherent strength and permanent durability to withstand the severe shocks of switching and road service. They are furnished completely machined and ready for application, increasing production output. In the event of collisions, damage to power plants is greatly minimized.

COMMONWEALTH UNDERFRAMES and TRUCKS provide maximum availability for your Diesel power.

GENERAL STEEL CASTINGS

GRANITE CITY, ILL. EDDYSTONE, PA.

On remodeled coaches . . . on the newest luxury trains—

it's NP *automatic*
END DOOR OPERATORS

Today, more than ever before, the operation of end doors on passenger coaches everywhere is easier, quicker, *safer.*

For literally dozens of important railroads have made it standard practice to install NP Automatic End Door Operators not only on new cars, but also on all reconditioned cars.

The reasons are obvious: with NP Automatic End Door Operators, doors open instantly at the mere touch of a finger; they remain open for a sufficient time to allow passage, then close smoothly, silently, safely!

NP Automatic End Door Operators have proved their worth in terms of passenger safety and convenience. Moreover, they are trouble-free, require little maintenance, and effect real savings in air-conditioning costs.

Our Publication No. 1063 gives complete information. Write today.

NP NATIONAL PNEUMATIC CO., INC.

Graybar Building, New York • 125 Amory Street, Boston 19, Mass. • McCormick Building, Chicago
Represented in Canada by Railway & Power Engineering Corp., Ltd., Toronto

WORLD'S LARGEST MANUFACTURER OF DOOR CONTROL AND SAFETY EQUIPMENT

How to Get Steel for Maintenance and Repairs

use NPA Regulation No. 4

Business enterprises, government agencies and public or private institutions may now use a DO rating to obtain limited quantities of steel for maintenance, repairs and minor capital additions. The rating to apply is DO-97 as authorized by the NPA's new Regulation No. 4.

Obviously the use of this rating does not automatically get the steel because it is impossible to maintain complete stocks under present conditions. However, it does assure your order of preference over unrated orders and equal treatment with all other orders bearing a priority rating. If we have the steel you get it. Moreover, we can in turn extend the rating which should help us to maintain stocks for your future needs.

Because of broken stocks, we suggest you give us alternate sizes, gauges and qualities that would be acceptable. In this way you increase the chances of getting steel you will be able to use.

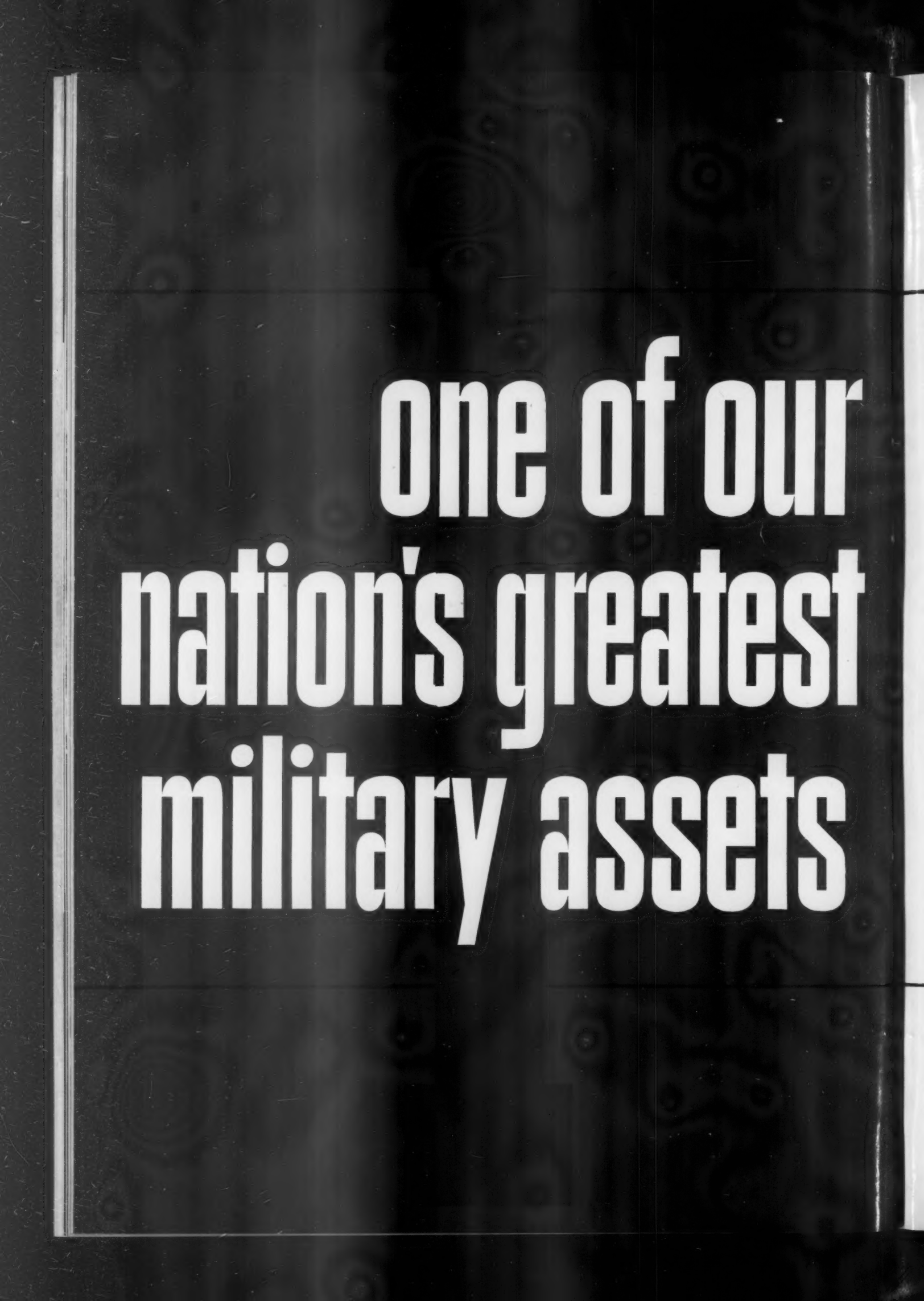
And remember, if your order falls within the provisions of Regulation No. 4 take advantage of it—use your rating! You can be sure that we will make every effort to take care of you as promptly and fully as possible.

If you do not have this Regulation No. 4 we will be glad to send you a copy.

PARTIAL LIST OF PRODUCTS—BARS • STRUCTURALS • PLATES
SHEETS • TUBING—IN CARBON, ALLOY & STAINLESS QUALITIES

RYERSON STEEL

STEEL-SERVICE PLANTS AT: NEW YORK • BOSTON • PHILADELPHIA • DETROIT • CINCINNATI • CLEVELAND
PITTSBURGH • BUFFALO • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO


one of our
nation's greatest
military assets

—is the fleet of more than 9,000 General Motors Diesel locomotive units now in service on American railroads.

Although General Motors Diesels comprise less than one-sixth of the nation's locomotives, they are hauling one-third of the freight and handling 40% of the passenger service. GM Diesel-powered trains haul more tonnage—reducing traffic congestion on the rails and speeding up the release of cars for return loads.

To meet the urgent demand, General Motors locomotives are being built as rapidly as our facilities and material permit—a program that assures American railroads a power task force without equal for the rapid transportation of food, fuel and munitions.

GM DIESELS ARE THE BEST RAILROAD SECURITY

ELECTRO-MOTIVE DIVISION

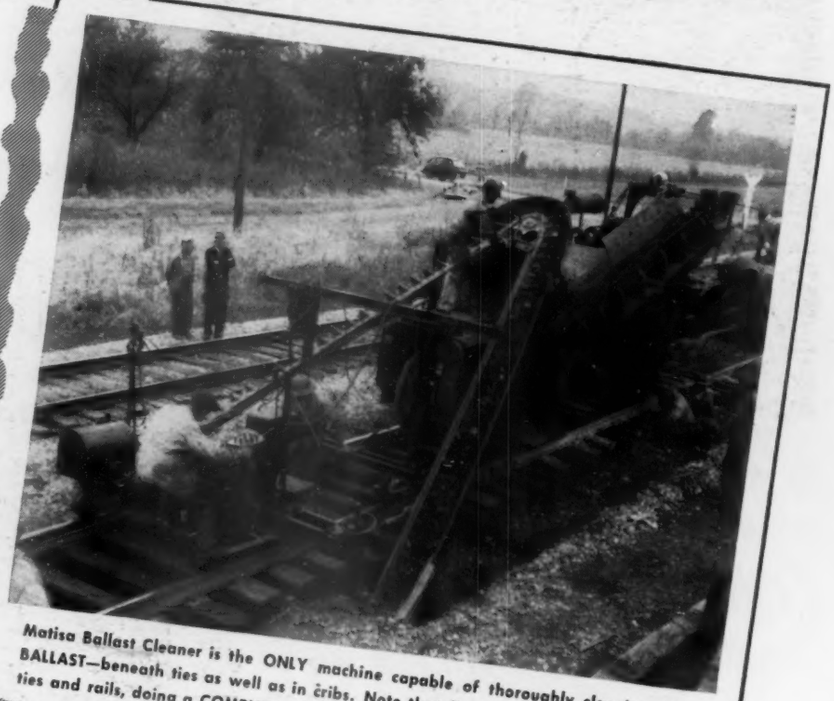
GENERAL MOTORS GENERAL MOTORS LOCOMOTIVES LA GRANGE, ILL.

Home of the Diesel Locomotive

In Canada: GENERAL MOTORS DIESEL, LTD., London, Ont.

Hold Grade Levels

Yet put up to 18" of CLEAN BALLAST UNDER TIES



Matisa Ballast Cleaner is the ONLY machine capable of thoroughly cleaning ALL BALLAST—beneath ties as well as in cribs. Note that digging teeth pass clear under ties and rails, doing a COMPLETE job.

BEFORE *Matisa* CLEANING

AFTER *Matisa* CLEANING

Whether to hold grade levels on dirty ballast, or provide a clean ballast cushion with a grade raise has long been a major maintenance of way headache. Now, with the Matisa Ballast Cleaner, you can hold the grade level (or *lower* it), yet put as much as eighteen inches of thoroughly cleaned ballast under ties!

Matisa cleaning—and *only* Matisa—solves the common grade problems at crossings, underpasses and in yards... And used with the Matisa Tamper, produces roadbed that is *better than new-laid track* put down with other ballasting methods.

Matisa Ballast Cleaners are furnished on a supervised rental basis for cleaning 1,000 feet or 1,000 miles of your track . . . rapidly, efficiently and *completely.* Write our M. W. Engineering Department for details on 1951 Cleaner availability.

THE MATISA EQUIPMENT CORP.

224 South Michigan Blvd. • Chicago 4, Illinois

ALL OVER THE WORLD *Matisa* TRACKWORK SPECIALISTS

STOP THIS

waste of manpower and materials!

How Pittsburgh BULKHEADS save you dunnage money

START THIS

use of permanent, returnable bulkheads!

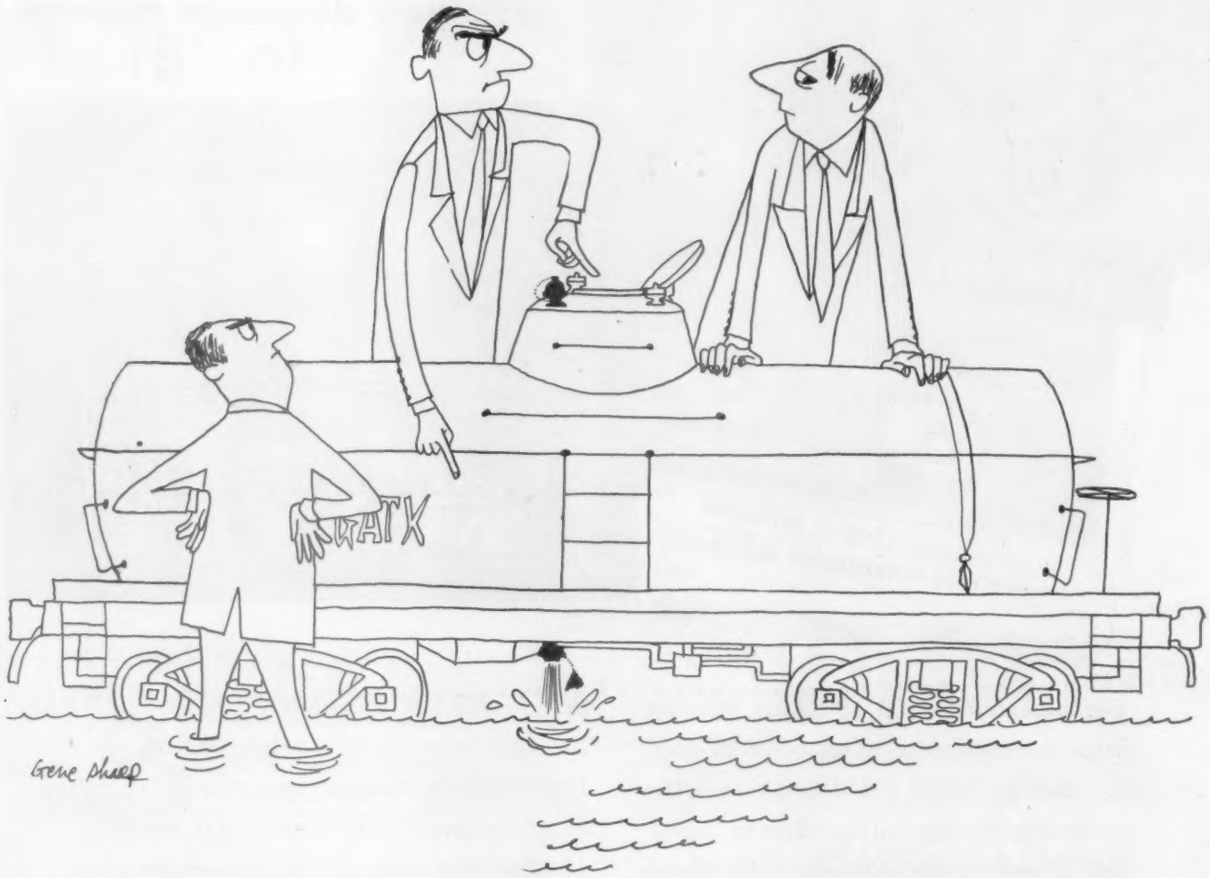
Get out your pencil and start figuring your dunnage cost using old-fashioned wooden gates and you'll quickly see the substantial saving you can effect by changing to permanent, *returnable* Pittsburgh steel bulkheads. You do away with lumber, straps, anchor plates and special tools, and each Pittsburgh Bulkhead can be installed by two men in two minutes. Moreover, each unit is so sturdily built that it will last indefinitely and reduce damage claims to an absolute minimum. *Experience has already shown that a Pittsburgh Bulkhead will pay for itself in savings of labor and materials in an average of 20 trips . . . the rest is profit to you.* Why not start saving dunnage money now . . . write today to Dept. RA-1, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pa.

BULKHEADS

a product of **Pittsburgh Steel Products Company**

A Subsidiary of Pittsburgh Steel Company

THE CARE AND NURSING OF TANK CARS



Always load a car with the outlet valve cap off so that if the valve is leaking, the leak will show up immediately.

Another way to get more from your GATX tank cars

GATX GENERAL AMERICAN TRADE MARK

GENERAL AMERICAN TRANSPORTATION CORPORATION
135 South La Salle Street • Chicago 90, Illinois
District Offices: Buffalo • Cleveland • Dallas • Houston • Los Angeles • New Orleans
New York • Pittsburgh • St. Louis • San Francisco • Seattle • Tulsa • Washington
Export Dept.: 10 East 49th Street, New York 17, New York

COMMODITY RESEARCH A MOST PROMISING ROUTE TO DAMAGE PREVENTION

Exhaustive research, by specific commodities, is the big news on the damage-prevention front as "Perfect Shipping Month" rolls around again. This latest manifestation of joint effort by shippers and carriers is likely to prove highly productive of savings in claims.

For one thing, this research has, thus far, been carried on in the cold, clear light of "pure science." The motive has been the analyst's "Find out what makes it go." Commodity research bids fair to upset buck-passing and it lifts damage-prevention activity from the sphere of the general to that of the particular. While all-inclusive principles are needed in any science or art, they can never be considered as anything but a foundation. It is in applying these principles to specific cases that results are secured which can be rung up in the cash register.

Agin' Sin

Everybody remembers the chestnut about Calvin Coolidge; how he went to church and, upon his return, was asked by his family what the minister talked about. "Sin," replied Cal. They asked him what the minister had to say about sin. "He was agin' it."

Everybody in transportation is dead set agin' loss and damage. But because—like mankind's attack on sin—so much of the effort has expressed itself in vague generalities, the whole subject has become something of a horror to anybody who has to write about the subject with the hope of interesting his readers. The truth is that most people consider discussion of loss and damage prevention pretty dull stuff. It's like safety. People do not underestimate its importance—any more than they do that of death and taxes. But they are accustomed to dismiss it by uttering pious platitudes at suitable intervals—then turning to the more exciting challenges of pricing, merchandising and, possibly, corporate intrigue.

Pre-Shipment Testing

Individual commodity research will play the devil with such a generalized treatment—by taking up the "sins" one by one, and from start to finish. When the subject of loss and damage is dealt with in generalities, the tendency is to compartmentize. We deal with "rough handling." We look at "inadequate packing." We think of "poor-riding equipment." We don't usually put them together. This "compartmentization" is a haven for those disposed to lay the blame for something that happens in the other compartment.

Take, for example, the extraordinary experiments carried on by a group of electrical household appliance manufacturers. Like most shippers, they realize that a poor claims record inevitably shows up in freight or rates ratings. That of enameled ware was definitely bad. In 1948 they formed a testing and standards organization which came to be known as the National Safe Transit Committee. Members submit their products to exhaustive performance tests and thereafter live up to the standards of packaging and loading which are indicated as necessary for satisfactory deliveries. The tests have shown that

there is no profound difference overall in the zones of greatest shock by one means of transport compared with another. By all means of transportation, maximum shock occurred during platform handling—not during actual transit. Another finding is that factory testing of the product alone or of the package alone does not give the right answer. To get it, the product must be tested in the package and must be followed through from the end of the production line to the point of use.

About 60 plants are in the program. Some 500 additional plants could be, but aren't. Even so, the work has paid off, overall. The ratio of claims paid to gross freight revenues earned on "stoves, ranges and parts" in the first half of 1950 was 5.9, compared with 11.0 in the whole of 1949. The ratio for refrigerators was 2.3 in the first half of 1950, contrasted with 3.5 in 1949. The participating industries in the appliance field spent not inconsiderable sums in this research effort. One of them, the Westinghouse Electric Corporation, writes: "We feel that the terrific amount of work we have done along this line and the expense we have been put to have been only 'a drop in the bucket' compared to the benefits we have received from it." This same company recently completed a series of switching tests with actual loads under service conditions in cooperation with the Pennsylvania, in pursuance of its aim to test the transit characteristics of its products *as packaged, as loaded and as shipped.*

Three-Party Pact

Take another example: The management of the National Distillers Products Corporation has authorized its traffic department to hold a two-day meeting at one of its plants, to which there has been invited practically everybody having to do with the production, packaging, loading, movement, and receiving of *spiritus frumenti.* Significant is the fact that the traffic managers of National Distillers' customers, as well as the producing plants, will be represented in force, and that technicians from the makers of bottles and containers will be present.

Tackling loss and damage through research by individual commodities requires the attention and care of three parties—shipper, carrier and consignee. The effort must fail if any of the three fall down on the job. In the research work on electric appliances cited, carriers have a big part to play; a representative of each form is represented on the committee. The railroads employ a specialist in ceramics who works closely with the committee. Distributors and retailers are of the utmost importance in the program, for it is upon their reports of the condition of the product *after it is uncrated* that much corrective action is taken.

In the forthcoming "clinic" of National Distillers, this "triple play" feature is recognized definitely. Scheduled on the chief discussion panel are a railroad man and speakers representing the liquor distributors, in addition to company personnel. Charles W. Braden, general traffic manager of Distillers, places great emphasis on the broadened use of uniform post-card forms by which consignees can report the condition of shipments received. He writes: "Our men can put forth the sincerest of best effort, but have no way of ascertaining the results unless we can advise them of the condition of the lading upon delivery of the goods."

The very high claims ratio suffered during and immediately after World War I was drastically reduced, chiefly because the railroads were energized into enthusiastic action by such means as the National Claims Prevention Congress and the slogan, "Cut loss and damage in half—it can be done." The effort was limited chiefly to the railroads, who were inspired to clean their own house before asking the shippers to take part. If so much could be accomplished then by but one party, how much greater results may be sought in the growing field of individual commodity research, wherein three parties work together in a mutual spirit of inquiry.

KNUDSON'S RULING ON TRUCKING HIT

By JAMES DANIEL
Scripps-Howard Staff Writer

(Reprinted by permission, from the New York World-Telegram & Sun)

Washington, March 23. — Defense Transport Administrator James K. Knudson has stirred up a hornets' nest by siding with the truck lobbies in their drive for higher truck weight and size limitations.

Mr. Knudson's action came as American Assn. of State Highway Officials and the U.S. Public Roads Bureau thought they were beginning to make headway in their long fight to standardize state trucking laws for the preservation of the highways.

The state highway officials are burned up now because Mr. Knudson appealed over their heads to the 48 state governors to disregard this advice.

Mr. Knudson says his purpose is to aid in the movement of national defense cargo. He says he "wears nobody's collar" and that it is without significance that no highway engineer is included among his staff advisers.

Among his advisers are Harry E. English, former president of the board of the American Trucking Assns., Inc. (ATA); Albert B. Rosenbaum, an ATA attorney; John L. Fraley, assistant sales manager for the Carolina Freight Carriers Corp., a trucking firm; and John H. Middlekamp, vice president of the Mack Motor Truck Corp.

In substance, Mr. Knudson has asked the state governors not to consider the state highway officials' national code as a ceiling but merely as a floor, which states are free to exceed. The ATA, which lobbies for higher trucking limits, originated this view.

Mr. Knudson also asks that no state above the national code now make any attempt to come down to that level. This is the ATA position and Mr. Knudson freely says that the timing of his appeal to the governors was made to head off moves in several state Legislatures to comply with the national code.

[Mr. Knudson's letter to state governors was reported in *Railway Age* of March 19, page 71.]

THE RAILROADS' DEBT TO METALLURGY

Railroad progress from the earliest times has hinged upon ever more efficient use of materials by men who have applied service experience to technical theory in design and developed essential elements of the railroad machine. This is true of rails, stationary steel structures of all kinds, and rolling stock, including cars and locomotives of all types. As is true of other major industries, the debt which railroads owe to metallurgy is stupendous, experts in this field having coupled their knowledge with that of railroad and supply company design engineers and service men to produce today what was called impossible yesterday.

Nowhere is this truth more evident than in diesel-driven passenger trains, including the equipment used in heating them. In fact, without this heating equipment, especially the compact steam generator, it would be impracticable to operate diesel passenger trains in any but the warmest climates.

The history of development of steam generators for diesel service is quite generally known but certain features may well be reviewed and perhaps emphasized. With no locomotive boiler of generous size to supply steam heat as well as traction power, manufacturers were asked about 15 years ago to produce an oil-fired steam generator for use on diesel locomotives which would take little space yet supply about 2,200 lb. of steam per hour to heat eight or nine cars. The principal difficulty with early steam generator designs was the fact that they had to be operated at maximum output a large proportion of the time and had no reserve capacity to fall back on when temperatures were exceptionally low, speeds high, or additional cars were coupled on in customary railway practice.

To meet this problem, individual steam generators of twice the original capacity have been developed, yet they occupy little more floor space than the older types. They may be used in combination with each other or smaller units to give any desired capacity up to about 9,000 lb. per hr. if needed for the most extreme conditions. Moreover, reliability has been greatly increased through elimination of "bugs" more or less inherent in early designs. All of these improvements must be credited to the effective joint efforts of the manufacturers who build and railroads who use the steam generators. Design engineers, operating specialists and service men representing railroads as well as manufacturers have worked together in presenting suggestions without which there could have been no real progress in steam generator design.

The contribution which metallurgy has made to modern steam generators is indicated by the fact that one of the designs in most common use utilizes 32 different types of metals in a single unit. These include, to mention only a few: hot-rolled steel base and coil spaces; extra heavy steel-pipe heating coils; stainless-steel ball bearings, valves, steel shafts, water pump parts and spray-nozzle tip; alloy-steel springs; copper tubing; brass nuts; bronze nozzle fittings; Stellite valve seats; Nichrome-wire starting resistors and electrodes; silver and cadmium plating on relays; Monel-metal and malleable-iron valve parts; cast-iron fuel-oil pump; Meehanite gears; Inconel-metal firepot and air ring; aluminum pulley sheaves and name plate.

The inclusion of all these different metals with widely varying properties in a carefully engineered steam generator unit which serves its purpose so effectively is unquestionably a major achievement and, perhaps, one of the best examples of what the metallurgist has done for the designer.

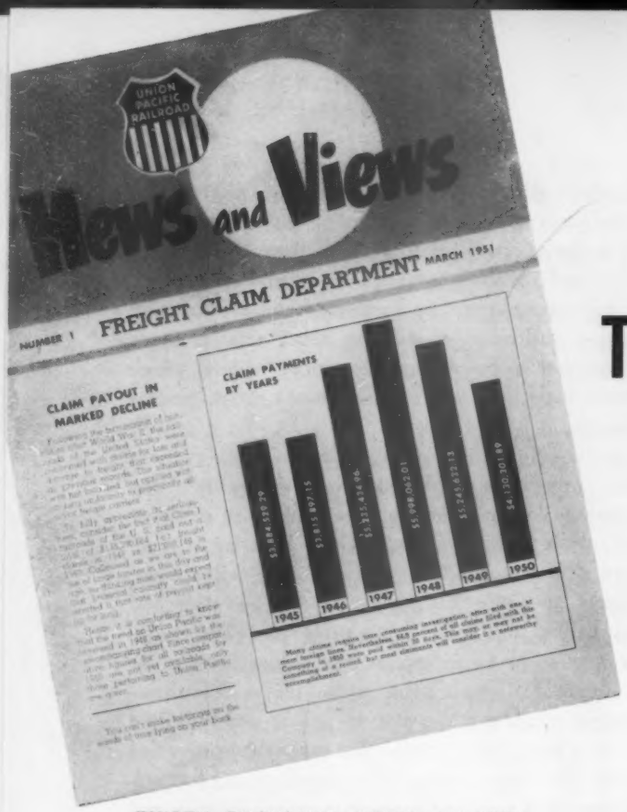
One aspect of the use of metals by the railroads which has not yet achieved a completely satisfactory status is the loss by corrosion. This is not primarily chargeable to the metallurgist, although corrosion prevention has been notably advanced by metallurgical developments in some cases, particularly in structural materials for car construction. No small part of the problem, however, lies in the field of protecting metals from the effect of corrosive agents. A notable example of losses which need this kind of protection for their reduction or elimination is the effect of salt water drippings from refrigerator cars. Losses from this cause are estimated at more than $10 million annually, including both track and rolling stock. This field is still wide open for improvement.

"Industry generally is enabled to increase its prices immediately after its costs are increased, but the railroads must always suffer some lag in time. Also, the railroads are always faced with opposition to any increase in rates and charges, being the one industry that is expected to absorb all of its increased costs. The prices of other industries have risen far more than railroad rates, fares and charges. The prices the railroads generally pay are more than twice what they were prior to World War II, yet railroad freight rates have increased only about 57 per cent on the average and passenger fares even less.

"Other industries are consistently earning more than 6 per cent upon their investment, but the railroads have consistently (excepting only a couple of war years) been kept on a level of earnings well below 6 per cent, yet there is no industry more vital to the nation's welfare, and which is called upon more often or responds more vigorously in times of national peril, than the railroads.

"Finally, it should be remembered we are now on a new plane of inflation which began in 1950. When the railroads ask for [an] increase in freight rates, they are in reality not asking for more compensation but simply to be stepped up in the direction of that higher plane in the inflationary spiral that is already occupied by other industries.

"Opposition . . . seems to be based mainly upon lack of emergency. The railroads should not be forced to absorb increased cost to the point of gasping for breath, but, like other industries, should be allowed to increase charges as and when costs are increased."—*From testimony presented to the Interstate Commerce Commission in Ex Parte No. 175 by C. McD. Davis, president, Atlantic Coast Line.*



Thirty Thousand Weapons Against Loss and Damage

By O. J. WULLSTEIN
General Freight Claim Agent, Union Pacific

THIRTY THOUSAND COPIES OF THE No. 1 ISSUE OF "News and Views" were distributed by the Union Pacific in March—10,000 to employees of the road and 20,000 to shippers and the managements of other railroads. "News and Views" will be published every two months. It's printed in color and measures 8½ in. by 11 in.

Bimonthly magazine is latest Union Pacific innovation in three-front campaign for good shipping

Last month the Union Pacific announced that it was beginning publication, for its workers, of a magazine aimed at control of freight loss and damage. In nearly every quarter of the past four years this transcontinental railroad has come out with an innovation designed to whittle down the nation's bill for strayed and ruined shipments, —amounting to about $100 million annually. No one of these innovations has ever been considered sufficient to do the job alone. All are a part of a continuing effort which the road intends will turn out more new idea weapons in the future to combat this uneconomic waste.

How has this constant "plugging" on a knotty problem paid off for the U. P. to date? The answer is: handsomely. Figures compiled recently by our Freight Claim Department show that, from an all-time high cash payout of $5,998,062 in 1948, the cost dropped to $4,130,301 in 1950—a reduction of 31.1 per cent. In claims submitted, the total of 168,191 tendered U. P. in 1947 was an all-time high. But for 1950 the figure was down to 114,247; this is a reduction of 32.1 per cent.

"Cheap at the Price"

Hence, considered solely from a dollar-and-cents standpoint, the U. P. does not view as expensive its decision to publish a four-page, bimonthly magazine—including both articles and illustrations—to deal principally with freight loss and damage prevention.

Entitled "News and Views," the magazine is printed in red, yellow and black on white and measures 8½ by 11 inches. Ten thousand copies have been distributed among train-crew members, and yard, mechanical and freighthouse employees working for the company. Twenty thousand copies of the first issue were also sent traffic managers, shippers, shippers advisory boards and officers of other railroads to acquaint them with U. P.'s newest project to combat loss and damage.

To give the magazine variety and the benefit of diverse opinions, it includes articles by top officers of U. P., company employees and shippers.

The first issue of "News and Views" features an article by President A. E. Stoddard, in which he stated: "I take this opportunity to extend my congratulations to the employees who have become aware of the seriousness of the situation, and have taken a personal interest in combatting the problem. Those engaged in handling freight are doing a far better job. So, too, are switch crews and all whose work pertains to the inspection, placing or handling of equipment. To each and all of you, my personal thanks—keep up the good work."

P. J. Lynch, vice-president of operations, authored an article entitled "Operation Hot Box," in which he declared: "Hot boxes are frequently initiated by impacts at too high speed in yards and terminals. This causes packing to be dislocated, and, in turn, causes waste grabs or waste inclusions, thus destroying or preventing lubrication. Such boxes, if allowed to run undetected, are very liable to result in burned off journals, which can be so disastrous. In the interest of safety, and in the prevention of loss of valuable equipment and cargo, I urge all of you to consider the importance of careful switching and proper inspection and servicing of journal boxes in yards, and inspection at every opportunity while on the road."

Other items are devoted to a description of an impact

register, pointers on the proper way to handle merchandise shipped in paper bags and reproduction of a chart showing claim payments by years from 1945 through 1950.

Importance of Program

We do not think that this new publication, or any other of the projects conceived during this company's program in damage reduction during the past four years, are out of line, in cost or work, with measureable gains —achieved or potential. Sight must not be lost of the immeasurable factors associated with a railroad's ability to move goods in first-class condition from shipper to receiver. Good will, future business won or retained and unwavering faith expressed by consignors and consignees cannot be entered in ledgers. These are considerations which undoubtedly far outweigh the tangible, monetary gains cited above.

A review of U. P.'s phenomenally successful campaign to reduce freight loss and damage must begin with consideration of the underlying principles upon which the program was founded. Taking a page from the military strategists of our late war, we at U. P. realized that no single effort would meet with success in reducing freight loss and damage. Like a military operation, we learned that it was necessary to campaign on several fronts simultaneously. That is why our program has been carried out in three concurrent phases: (1) Appeals to raiload management; (2) education of railroad employees; and (3) cooperation with shippers and receivers of freight.

To emphasize the importance of claim reduction to key U. P. officers was, of course, a relatively easy task. Executive level conferences are regularly scheduled and are well attended by vice-presidents, general managers, general superintendents and division superintendents. As a matter of fact, U. P.'s record in the field of freight loss and damage prevention is the result of fine support of the program on the part of the railroad's president, vice-president of operations, and all other officers in the operating, mechanical, traffic and transportation departments. Under our organizational chart, the general freight claim agent reports directly to the president.

Officers of other railroads have been contacted to demonstrate that money spent on claim reduction is money well invested. This has been carried out during the past four years through correspondence, literature, personal conferences and the presentation of material in railroad and shipping publications, all of which have been most interested and cooperative in the realization of the importance of this subject to the entire industry.

A case in point is U. P.'s continuing effort to promote and encourage the use of bulkheads in the original loading of cars. The great benefits derived by the utilization of bulkheads in comparison with their low cost was given widespread publicity through the printed word and illustrations.

Reaching Employees

U. P. employees have shown themselves to be keenly aware of the loss and damage problem and they have been reached and impressed through a wide variety of channels of communication. The foundling magazine, "News and Views," will have a definite effect on employee attitude.

An example of successful employee education was a series of 12 posters directed to freight handlers, operating men and all others associated with the movement of freight. The 17- by 22-in. color posters appeared on bulletin boards at freighthouses, yard offices, repair tracks and other strategic points along the railroad's 10,000 miles of rail with a new poster appearing each month. Thirty-six thousand posters were printed, the great majority of them used on line. Sets were also supplied other interested railroads.

The Author

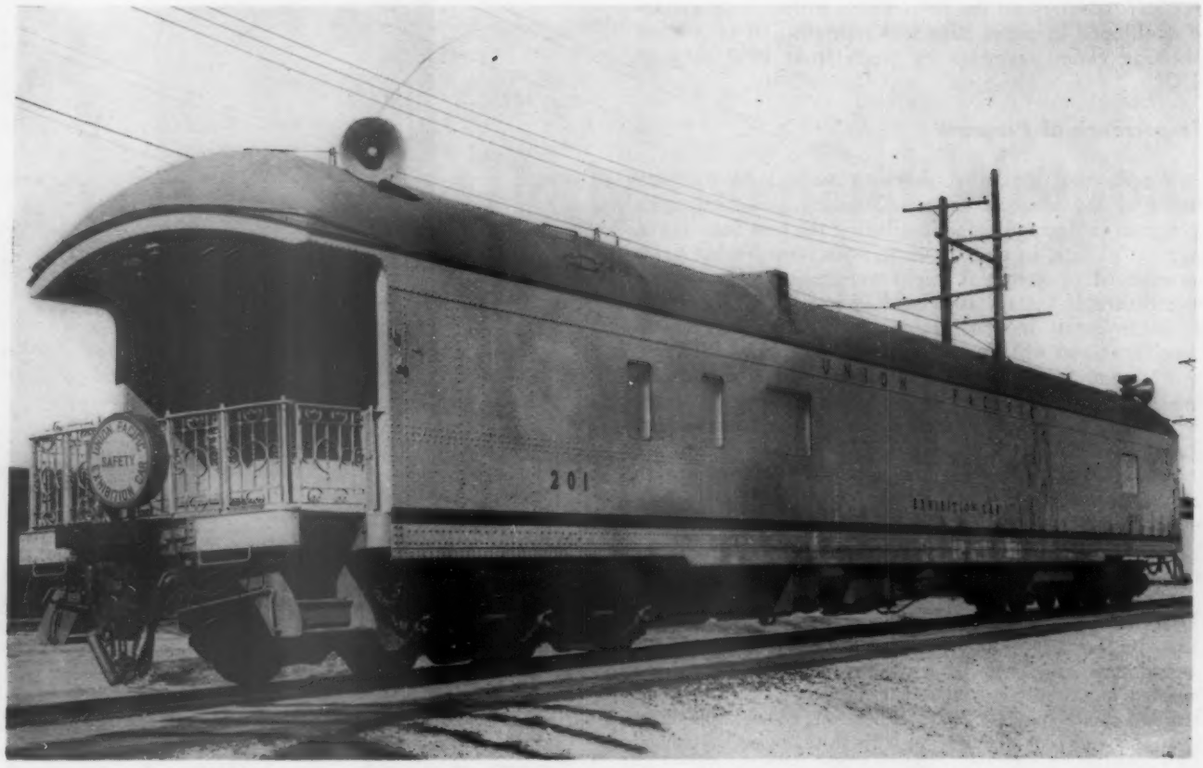
The U. P. localized its posters by a specific, rather than a general, approach. In lieu of the usual artists' drawings of railroad men at work, the posters featured photographs of U. P. employees: checkers, truckers, stowers, enginemen and others. Each man was quoted on his opinion as to how his job should be done to prevent freight loss and damage. For instance, under the catchy headline, "Careful Loader or Careless Juggler?" a tractor driver at the railroad's Los Angeles freighthouse was quoted to the effect that "Careless loading or overloading of trailers is frequently responsible for damaged freight."

Pictured and quoted workers were selected on a geographical basis in order to have all sections of the railroad represented. This gave employees on every part of the railroad a feeling of importance, of being an integral part of the whole operation of moving freight. In addition, *esprit de corps* between widely separated points on the railroad was engendered. These posters were designed to drive home the idea that moving freight safely is a personal problem—a matter of job permanence, keeping and building business, advancement and, of course, the pay check.

These points were put across by such terse lines as "Diligence Denotes Dependability . . . Dependable Men Win Advancement" and "You too can avoid damage to freight . . . Keep shippers satisfied . . . and thus assure the permanency of your job." Another, designed to build morale, read, "While everybody likes his pay check, there is no greater reward in business than the personal satisfaction of being recognized as a master workman in his chosen field, one who merits promotion when opportunity knocks."

Use of Movies

The Union Pacific has also resorted to the silver screen as an attractive means of getting the Freight Claim Department's message across to freight-handling employees. Three years ago, "Who Done It," a 16-mm. sound-color motion picture, was produced by the rail-



road to show workers that care in handling freight pays off and how the company, shipper, receiver and consumer suffer when goods are lost or damaged. The eight prints of "Who Done It" have been in continuous use since the picture was released and a waiting list still exists. In addition to U. P. employees, the film has been borrowed for screening at shippers' meetings, before personnel of government warehouses and depots, by other railroads and by schools and colleges. Pleased with the success of this film, the U. P. is now putting the finishing touches on an even lengthier picture titled. "Do Right by Our Nell." This picture is directed principally to yard employees, stressing the necessity for careful switching and handling of cars.

Almost as spectacular and revolutionary as U. P.'s use of motion pictures in the freight loss and damage prevention field was the utilization of "a schoolhouse on wheels." From time to time, a specially built and fitted railroad car—known as the exhibition car—has toured towns and cities on the system for use as a meeting place for company employees handling freight. The U. P. was, I believe, the first railroad to use a car of this type for loss and damage prevention meetings.

Employee meetings, however, are not contingent upon the visit of the exhibition car. The conductor, the switchman, the yardmaster and a multitude of other classes of employees are lending an active hand in a program believed to be the most comprehensive of its kind ever undertaken. At each terminal a freight loss and damage prevention committee has been established which meets as deemed necessary to solve particular problems which may arise and to consider ways better to combat waste. These committees are usually headed by a trainmaster or a yardmaster and include both company officers and employees.

At each station of any size, meetings of all freight handlers are called from time to time to discuss specific instances of loss or damage and the subject of prevention in general. These meetings are on company time and are usually called by the local agent at his discretion.

Dinners "On the House"

Finally, once each month a complimentary dinner meeting is called on each of Union Pacific's seven divisions. The site is rotated among the key points of each division. These meetings are held in the evenings under the direction of the respective division superintendents and are attended by staff officers, freight handling employees and by the chairmen—and possibly other members—of the terminal committees within the division. These meetings are particularly effective for reaching large numbers of employees.

From the standpoint of shippers and receivers of freight, the most unusual freight loss and damage prevention service established by U. P. is its staff of container engineers. Inaugurated shortly after V-J day, this staff consists of men who have received formal engineering training in the packaging and loading of goods, as differentiated from men who have merely acquired adeptness is this science through on-the-job experience and association. Duties of the staff include the inspection of container failures, analysis of the cause and the preparation of written reports. Often these written reports—as well as personal conferences with shippers—lead to the correction of faults in containers and loading methods, with a resultant decrease in damage in transit.

The demand for the services of these experts has increased so greatly that they are kept traveling on the system, on the loading platforms, in the shipping departments of consignors, on the receiving docks and in

"A SCHOOLHOUSE ON WHEELS," (facing page) the Union Pacific dubs this exhibition car assigned to loss and damage prevention. Providing living quarters for personnel, the car includes a blackboard, public address system and motion picture projection screen

A MEETING ON LOSS AND DAMAGE PREVENTION (right) in progress on the Union Pacific exhibition car. Individual hand microphones, mounted on brackets along the side walls, enable members of the audience to use the public address system in asking questions of the forum leader

the warehouses of consignees, for weeks at a time. The container engineering staff is only a part of the road's loss and damage prevention organization, which also includes a corps of freight service inspectors who give their entire time to correcting irregularities in freight service and assisting shippers in solving container, loading and bracing problems.

The company also keeps shippers informed on the newest and best developments in packaging and loading through profusely illustrated literature. For example, two editions, totaling 65,000 copies, of a folder entitled "If It's Worth Shipping, It's Worth Packaging Right!" have been distributed to traffic managers, freight receivers and railroad agencies. Subjects covered included: corrugated and solid fibre shipping containers, the sealing of fibre shipping containers, crates, nails and nailing, nailed wood boxes, plywood shipping cases, wirebound boxes, wirebound crates, steel strap and marking.

Patterns for Loading

In a similar project, 20,000 copies of a 32-page pamphlet entitled "Recommended Carloading Patterns for Canned Goods" were sent a few months ago to canning associations, wholesale grocer associations and their members, railroads, shippers advisory boards and shippers of other types of cased goods.

As in similar literature prepared by the railroad, thoroughness was a keynote of this publication. It included 16 loading patterns for the case sizes most commonly shipped, three dimensional tables for case sizes and loading, and discussion of doorway protection, unitized loading, loading mixed sizes, stop-over cars, sealing of cases, and illustrated descriptions of typical vacuum and cannery dents.

Today U. P. officers are confident that, by continuing to pursue energetically the combination program of appeals to railroad management, education of railroad employees and cooperation with shippers and receivers of freight, the next four years will see a further substantial reduction in claim costs for the company.

Communication . . .

Railroad Attitude Toward Antistrike Legislation

CINCINNATI, OHIO

TO THE EDITOR:

I was very much interested in editorial of the February 26 issue of the *Railway Age* entitled "Harsh Words From Mr. Pegler." It is to be admitted that your approach to the matter is likely more appropriate than that suggested by Mr. Pegler, but I wonder if your "simple solution" has been suggested directly to those responsible for the handling of our railroad labor matters.

If I remember correctly there is a committee in Congress discussing the "sick" strike of the railroad yardmen, and I wonder if railroad officers will take advantage of the opportunity to appear and suggest remedies for the situation which the public was forced to suffer from in February.

R. A. ELLISON,
Manager, Transportation Department
Cincinnati Chamber of Commerce

[The railroads favored the so-called "Donnell Bill" which was proposed in Congress last year — and that bill embodied, in substance, the program for preventing strikes on the railroads which this paper has been advocating. In their appearances before congressional committees and elsewhere, spokesmen for the railroads have continued to urge a legislative approach to this problem not differing in any essential way from that suggested by this paper.—EDITOR]

Riding the Caboose of The "Capitol"

By CHARLES LAYNG
Associate Editor, *Railway Age*

High-speed carload train of the Seaboard Air Line makes fast time as a first-class run from Richmond to Atlanta

The "Capitol" on its 17½-hour run from Richmond, Va., to Atlanta, Ga.

Hermitage yard of the Seaboard Air Line in Richmond, Va., is a busy place around noon every day, as the "Capitol" is being made up for its run to Atlanta and Birmingham. The "Capitol," No. 27, is listed as a first-class train on the time cards and is operated as such, but it doesn't carry "varnish." Its consist is made up of box cars instead of sleepers and lounge cars. Primarily a carload train for high-class freight on which fast service is essential, it also handles a number of through forwarder cars.

As soon as World War II was over, a study indicated to Seaboard traffic officials that a fast train for carload traffic from Richmond to Atlanta gave promise of success in attracting high-class traffic and, after conferences with the operating officers to determine the feasibility of such a schedule, the "Capitol" was put in service late in the fall of 1945. It has more than lived up to expectations and now averages between 40 and 60 carloads of high-class freight daily. It makes the 578.7-mile run from Hermitage yard, Richmond, to Howells yard, Atlanta, in 17 hr. 30 min., scheduled as a first-class train throughout. Then, as a second-class train on the time card, it leaves Howells yard 2 hr. 20 min. later and makes the 161.5-mile run to Birmingham yard in 5 hours.

The northern connection was delayed on the morning that Seaboard officers had arranged for me to ride the caboose of the "Capitol," but fast work on the part of the yard and car forces got the train out of Hermitage at 12:37 p.m. Switching down the line is done from the head end, so that, immediately ahead of the caboose, we had 13 cars for Atlanta and connections there, including four forwarder cars. Ahead of that block were 13 cars for Birmingham and connections, including 11 forwarder cars. The next block ahead consisted of 8 cars for Greenwood, S. C., and at the head end were 15 cars for Monroe, N. C., and connections. An empty tank car raised the total to 49 cars, 2,009 tons, made up of 15 cars of forwarder merchandise and carloads of acid, machinery, paper, radios, soda, roofing, soap, carpets, canned goods, paper board and beer. At the head end were two 1,500-hp. diesel units which make the through run, Richmond to Atlanta.

"We'll be about half an hour late at the 35 mile post," the trainmaster explained, "because of slow orders for track surfacing where we've just replaced 100-lb. rail with 132-lb."

His prediction was correct and, as a matter of fact, we were 38 min. late passing Norlina, N. C., 102.4 miles from Hermitage. The first scheduled stop was Raleigh, 160 miles from Hermitage, the second at Hamlet, N. C., 97.3 miles from Raleigh. For this distance of 257.3 miles, No. 27 runs over the main line of the Seaboard to Florida, over which 16 other regular first-class trains and 10 regular second-class trains are scheduled daily. This number of trains is greatly augmented in February by extra sections of passenger trains to handle the peak Florida traffic, as well as extra freights handling Florida perishables. Since, apart from two or three stretches of a few miles each, the Seaboard is single-track for the entire distance and since the grade line is broken almost continuously by crossing numerous river valleys, I viewed the trainmaster's promise that we'd reach Hamlet on time with considerable skepticism.

However, the single-track line between Richmond and

Two Seaboard fast freights make a rolling meet in C.T.C.-controlled territory near Hamlet, N. C.

Raleigh is equipped with centralized traffic control, and, after watching a few of the rolling meets permitted under this type of operation, I began to have more faith in his statement. This impression was heightened when, after a nonstop run, No. 27 pulled into Raleigh yards at 5:03 p.m. Train and engine crews are changed there, as well as cabooses, and the train is inspected and I looked forward to a chat with Charlie Morton, the superintendent, but I hardly had time to say "Hello" before we were rolling again, at 5:12. Four car inspectors, two from each end, had given the train a thorough inspection and a diesel switcher had changed cabooses in that time.

Between Raleigh and Fetner, 8.9 miles, the Southern and Seaboard have a joint double-track arrangement and between Fetner and Moncure, 22.3 miles, we were again in C.T.C. territory; between Moncure and Aberdeen, 42.8 miles, we were in train order and automatic block signal territory, with double-track from Aberdeen to Hamlet yard, 24 miles. No. 27 made the 97.3-mile run through this territory, without a stop, in 2 hr. 22 min. and the trainmaster's prediction was justified.

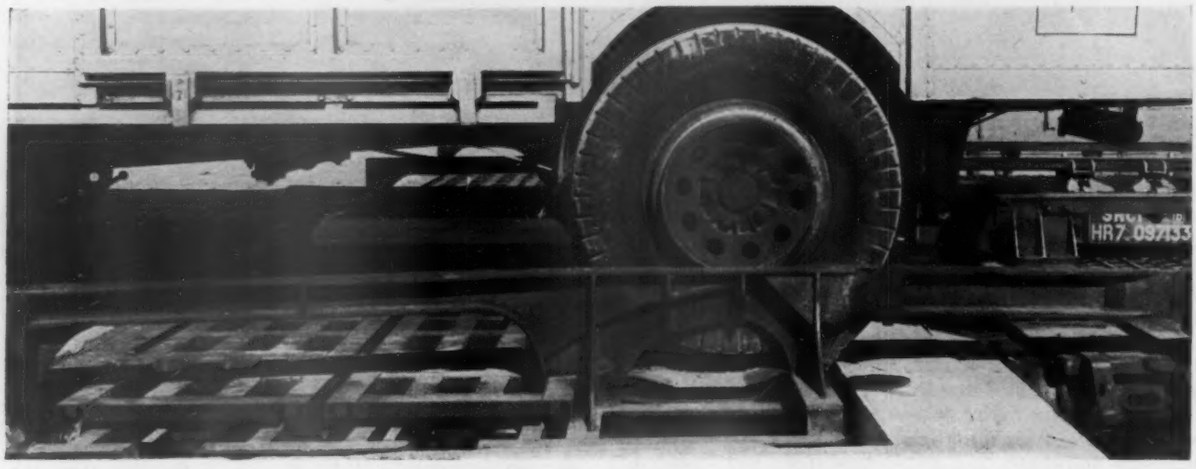
Hamlet is a hub of the Seaboard, with lines entering it from five directions. We got there only a few days after the epidemic of switchmen's "sickness," but the big yard was already fluid. No. 27's diesels were cut off, serviced and inspected, the train was thoroughly inspected, five cars for Birmingham were switched in at the head end and the "Capitol" got out of town at 8:15 p.m. We were now off the Florida line and on the main line to Atlanta and Birmingham. This, for the present, is single-track, train order territory, although C.T.C. is in the process of installation on large segments of the line. We were also off Charles I. Morton's Virginia division and on John White's Georgia division.

No. 27 made the run from Hamlet to Monroe in 1 hr. 30 min. Monroe is the first set-off point and 15 cars were dropped there, while train and engine crews and cabooses were changed and the train inspected. Standing time there was 25 minutes. The 118.8-mile run from Monroe to Greenwood, S. C., the second set-out point, was made in 3 hr. 9 min.; 8 cars were set off and 13 picked up there. No. 27 got out of Greenwood at 1:43 a.m., after 24 minutes there, and made the 16 miles to Shops, S. C., near Abbeville, in 22 minutes.

In preparation for the 134.1-mile run to Howells yard, Atlanta, the train and diesels were both given thorough inspections, crews and caboose were changed and 6 loads and 9 empties were picked up. All of this occupied 22 minutes and, leaving Shops at 2:37 a.m., No. 27 rolled into Howells right on the nose at 6:15 a.m.

This noteworthy performance on a single-track railway—and No. 27 has an excellent on-time record—is possible for a variety of reasons. In the first place, it will be noted that the "Capitol" does not stand around in terminals. Setting out, picking up and changing cabooses are planned operations at these terminals and match up with the high speed of the train on the road. Sufficient car inspectors are supplied so that the train is not held up for inspection. In this connection, it might be mentioned also that, at many places en route, the Seaboard has car inspectors equipped with pick-up trucks containing all necessary supplies and tools for rapid running repairs in case of hot boxes or other minor defects that can be handled rapidly without undue delay to the train. While on the road, the train is given good dispatching. Most of the C.T.C. has been installed for some years and the dispatchers have learned to get the most out of this valuable tool for efficient operation.

1 Tractor backs trailer onto flat car. Other trailers are loaded on another car immediately behind the backing vehicle. Note that the coupler and king pin frame automatically fold back against the trailer as the tractor uncouples and pulls away from the trailer. At right is another string of flats to be loaded. Note rails on the flat car

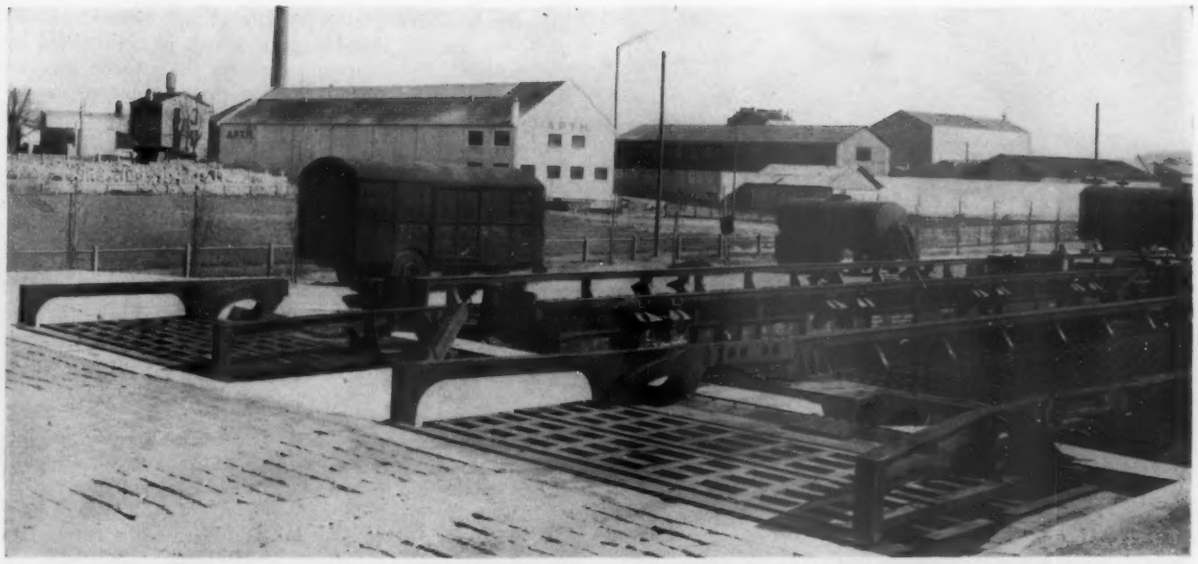


3 When loading, rear auxiliary flange is lifted to the height of the rails on the flat by the inclined rails of the loading equipment . . .

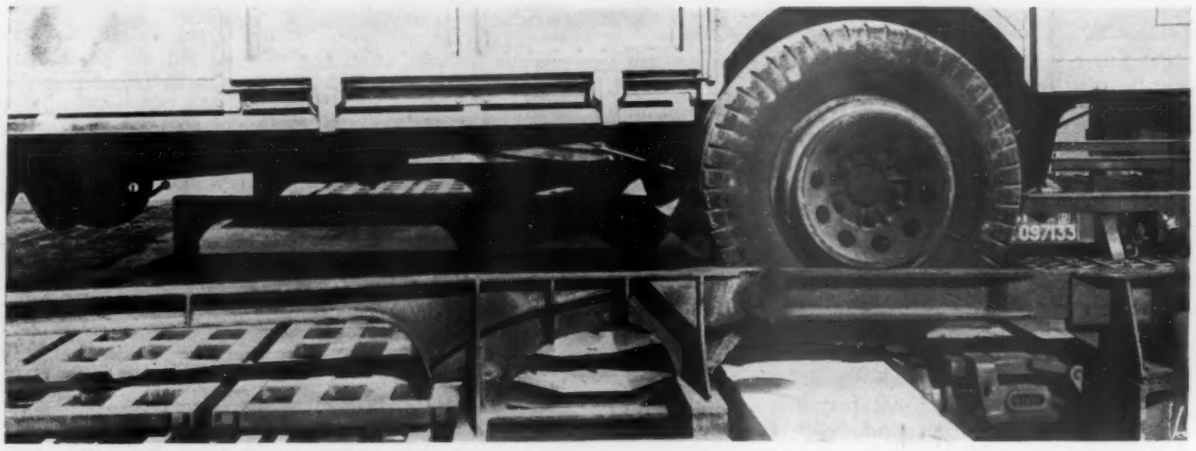
G. T. T. M.—The French System of Winning Truck Traffic Back to the Rails

A novel loading device, a trucking association, unusual tariffs, and fast rail movement are combined to win shippers by superior service

The French National Railways, like railroads throughout the world, have been troubled by truck competition. In recent years the rapid growth of a system of handling highway trailers on railroad flat cars—to the point where there are more than 1,000 trailers specially designed for



2 **This apparatus speeds loading. In the right foreground communicating arms from the loading dock have been connected to the flat and the loading ramps on the freight car are in position to receive tractors. In left background the situation is reversed. French authorities say that with equipment of this sort, plus the auxiliary flanged wheels of the trailers, average loading time, including securing to the car, is only about 1½ min.**



4 **. . . and then it rolls onto the rails fixed on the car floor**

this service in daily use—has provided the railways with an effective tool to meet this competition.

In France, railway traffic moves on class and commodity tariffs, while highway traffic moves on flat weight-distance charges which do not vary for different commodities. As a result, although truck competition has not developed to the extent it has in this country, it has made substantial and painful inroads into high-class railroad freight.

Over the years several different methods of handling highway trailers on railroad flat cars have been developed on the continent. But 14 years of actual experience with them all has led to an apparent preference in France for a particular system known as the "U.F.R.," or Association for Uniting Rail and Truck Transport.

During the war the limited railroad facilities for handling highway traffic then available were used to the utmost because of their extreme flexibility. Following the war, Robert Mazeaud, general manager of one of the large French trucking concerns and president of a trucking association in Paris, led a movement to realize on the potential value of railroad movement of highway trailers to carriers and shippers. Accordingly, he formed a voluntary, non-profit trucking association, the Groupment Techniques des Transporteurs Mixtes (the "G.T.T.M.") to foster and develop the U.F.R. method of handling highway trailers on railroad flat cars. The technical manager of this organization, D. Clejan, in great measure was responsible for developing the system to its present status.

Any French truck operator who owns a U.F.R. trailer or who has a tractor capable of handling U.F.R. trailers may belong to the association, and there is no limit to the number of members in any locality. However, manufacturing difficulties have limited the number of trailers available and that, in turn, has kept the size of the

The trailer is locked in position by this clamp or chock, which allows some movement of the wheels, thus absorbing some of the shocks of switching and slack action. The tires are not in contact with the car deck

organization within bounds. Many of the members are over-the-road truckers.

Under the G.T.T.M. system, at present there are in all of France about 60 central depots where the railroad will receive and deliver truck trailers. (It is estimated that eventually around 100 of these depots will be established, and that these will be adequate for full coverage.) Each station services operators in a radius of 25 to 30 miles. The depots are located near railroad yards so cars can be switched into and out of trains quickly.

Each trucker belonging to the association works for his own account. He solicits his own traffic, builds his own rates (though he must work from an agreed-upon association rate base) and deals directly with the shipper and the railroads. (He is not permitted, however, to indulge in cut-throat competition with another association member by establishing below-cost rates.)

Each trucker can make his own arrangements for handling his trailers at other cities. At the larger depots G.T.T.M. appoints a single trucker ("tractionnaire official"), bonded by G.T.T.M., to work as a distributor for inbound trailers, but no one is required to use his services. At the smaller depots where there are few members, the "t.o." handles all distribution.

The disposition of empty trailers is left to the discretion of the owner. He may request the delivering trucker to attempt to secure a load returning, or he may request the trailer returned empty. Rarely are inbound "foreign" trailers loaded for any destination other than a point served by their owners. The empty return of the standard trailers is reported to be only about five per cent.

The G.T.T.M. handles all loading and unloading of trailers from railroad equipment at the larger depots, and handles all dispatching at a small charge to members. It owns or rents all of the railroad cars used for its services. Through a subsidiary, Soframixed, it handles the maintenance of all trailers at central maintenance plants. The owners of the trailers are only charged for parts and supplies—G.T.T.M. supplies the labor and shop equipment without cost. The same shops handle the maintenance of the association's wholly owned railroad cars—all but the running gear, which is maintained by the railroad. The railroad considers these to be services which it would have to provide, to one degree or another, so in return, it pays to the association a 6 per cent commission on all of the revenue which it receives for the movement of freight (not empty trailers) via G.T.T.M. This is the income which is used to support various services to the members.

Although the idea of moving trailers on flat cars, and much of the pioneer work with the U.F.R. trailers, originated with the French National Railways, G.T.T.M. has had to "sell" the railroad the idea of letting the truck companies handle all but the simple rail movement. In so doing it had to overcome several railroad objections. The railroad thought this service might damage its profitable forwarder traffic, or that it might divert traffic which would otherwise move by rail. So G.T.T.M. has agreed to accept only freight whose actual point of origin or destination (or both) is at a point not served by a railroad siding. In other words, G.T.T.M. will handle only that freight which would have to be trucked to or from trackside. It has also agreed to a limit of three consignments to a trailer, thereby eliminating any chance of their use by forwarders.

The Rate Pattern

When G.T.T.M. first started, regular railroad commodity tariffs were used, with charges assessed for the revenue tonnage only; the railroad did not charge for the deadweight of the trailer because it found that the deadweight of a railroad flat car plus two trailers was just about equal to the deadweight of a box car of similar capacity. Empty trailers were returned at a special low rate. The railroad gave G.T.T.M. members an 11 per cent reduction (which has since been modified to about 6 per cent) under regular tariff charges in compensation for the pick-up and delivery services which the railroad would otherwise have to render. The minimum for the movement of one trailer was set at 70 per cent of the regular carload minimum, but when two or more trailers were moved together to a common destination, the minimum for the entire shipment was set at 80 per cent of the regular carload minimum.

Later the railroad offered G.T.T.M. another tariff for use in soliciting bulk movement of individual commodities. This tariff sets a specific all-commodity rate, with a minimum of 3 tons per trailer and 6 tons per railroad flat car—these are of course the small French cars. Charges are determined through the use of the special all-commodity rate to which is added a fixed price per trailer equal to 4½ times the commodity rate per ton for movement of a single trailer, or three times the commodity rate per ton for each trailer when two or more are moved on a single bill of lading. Empty trailers must be returned at a fixed per ton rate for various distances. It is permissible for empty containers for re-use to be loaded in returning trailers. The rate on the containers is, per ton, the same as that applying to the trailers.

The railroad has offered G.T.T.M. schedules comparable to those which it maintains for its own "Grande Vitesse" (manifest freight). Some examples of the schedules are:

Between Nice and Tourcoing	781.6 miles	*31 hours 14 minutes
" Le Havre and Marseille..	660.5 miles	34 hours 53 minutes
" Paris and Marseille	523.5 miles	28 hours 43 minutes
" Paris and Lyon	310.6 miles	12 hours 40 minutes
" Limoges and Toulouse ..	194.5 miles	6 hours 5 minutes

*Note: time is from loading dock to loading dock.

New York, Ontario & Western coal docks at Weehawken, N. J., just across the Hudson river from New York City

These Shippers Want Rail Service

"Eleven-County Consolidated Committee" works with railroad management to increase traffic, cut expenses and prevent possible abandonment of New York, Ontario & Western

Up in central New York state, and in some neighboring counties in northeastern Pennsylvania, there's a group of shippers who know the value of railway service, and who want to keep what they have. What's more—they are carrying on an active, organized campaign to help their railroad win back the traffic it needs to survive.

Spearhead of this cooperative rail-shipper movement is James E. Leland, retired fuel dealer of Hamilton, N. Y., who is chairman of an "Eleven-County Consolidated Committee." Assisting Mr. Leland are W. C. Kessler, professor of economics at Colgate University; W. C. Van Duzer, of Middletown, N. Y., committee vice-chairman; and a number of county chairmen and co-chairmen.

The committee's particular concern is the 544-mile New York, Ontario & Western, which, since 1937, has been so deep in bankruptcy that its total abandment, or sale, either in whole or in part, to other railroads or to non-railroad purchasers, has been considered at several federal court hearings in recent years.

Railway Age is indebted, for most of the material in this article, to Professor W. C. Kessler of the Department of Economics of Colgate University.

A Look at the Past

Projected originally as the New York & Oswego Midland, the railroad was intended to be a New York-Great Lakes "short line," running directly to the nearest lake port, Oswego. But hardly had its first train been run, in 1871, when the panic of 1873 forced the new company to seek refuge in the courts, from which it emerged in 1880 under its present name.

With the new name, the company acquired a certain measure of prosperity that was to last for some 45 years. By constructing a line from Cornwall, N. Y., to Wee-

The N. Y. O. & W. was one of the first Class I railroads to be converted to complete diesel operation

Passenger service, once a source of substantial revenue, is now limited to summer operation between New York and Catskill Mountain resorts

hawken, N. J.—ownership of which was later transferred to the West Shore (New York Central) with trackage rights for the N.Y.O.&W.—the latter secured a more direct connection to New York than it had previously had. And by building the Ontario, Carbondale & Scranton, from Cadosia, N. Y., to Scranton, Pa., it obtained access to the Pennsylvania anthracite fields, and also to traffic coming in from the west via the Delaware, Lackawanna & Western and the Lehigh Valley. Thus, the "O & W.," which began as a Great Lakes-to-seaboard line, became one of the small group of anthracite coal roads.

So long as such coal dominated the home fuel market in the northeastern states, the road continued to prosper. As late as 1937 anthracite contributed almost half of its operating revenues. From these revenues, plus those derived from carriage of milk and fresh vegetables from upstate farms and from passenger business between New York City and Catskill Mountain vacation areas, the road was able to meet its obligations, and even to pay dividends, although somewhat irregularly, from 1905 to 1927.

But the basis of this prosperity began to weaken after World War I, principally as a result of coal strikes, truck competition and the beginning of passenger traffic's flight to the highways. During a few years in the mid-thirties the road seemed to recover, but this was primarily due to sale of its Pennsylvania coal properties on such terms that coal shipments from them had to be made over its rails. When the mines finally gave out, the full effects of the depression, of inherently high operating costs, and of competition from other railroads, trucks and the New York State Barge Canal were felt. As a result, in 1937, the line went into bankruptcy for the second time.

Bankruptcy, of course, freed the company from bond interest obligations, but could not eliminate its serious and fundamental economic difficulties. World War II gave it a brief respite—operating revenues increased about 28 per cent as a result of general prosperity along the line and the detouring of grain, lumber and explosives over the N.Y.O.&W. to avoid the congested yards of larger roads. But after the war, the same economic forces which led to the 1937 bankruptcy—low tonnage and high costs—came back into play.

Management found it difficult to keep up with national wage increases, so that in 1949 operating employees went on strike against what they regarded as substandard pay. After 10 days of complete work stoppage, during which the trustees considered applying for complete abandonment of the line and organized labor charged "bad faith," the strike was ended by an agreement providing for postponement of the abandonment petition.

Application was made to the court, returnable June 7, 1950, for authority to sell the road to the highest bidder. Only a few bids were received, and those, in the opinion of the trustees and of the federal court having jurisdiction over the railroad's reorganization, were too low. The sale was cancelled and the trustees have since continued to operate the line, subject to possible foreclosure by holders of the railroad's bonds. It was the threat of such foreclosure that, in June 1950, led various shippers and receivers of freight and other interested persons to form the Eleven-County Consolidated Committee, designed to increase traffic for the railroad and to avoid foreclosure and possible abandonment.

The Present Problem

Soon after the committee was organized Professor Kessler made a complete survey of the railroad, which showed that its fundamental problem was simply lack of traffic—a condition which is sharply emphasized by the figures in the accompanying table comparing traffic density and freight revenue per mile of line for the

Ontario and for four other Class I railroads of approximately comparable size, and operating in the same general territory.

Each of those roads, it will be noted, carries from four to seven times as much tonnage, per mile, and receives from four to seven times as much freight revenue, also per mile, as does the N.Y.O. & W.

In addition to the drying up of anthracite coal traffic, and the loss to highway transportation of milk and passenger business, Professor Kessler ascribed the lack of traffic to the facts that:

(1) Most large traffic centers served by the Ontario are, with a few exceptions, served also by competing railroads, by trucks, and, in some cases, by the toll-free New York State Barge Canal;

(2) The road, in consequence, originates comparatively little traffic, and has to depend for about two-thirds of its business on traffic delivered to it by other lines, which it either terminates or handles as "overhead"; and

(3) "Constant talk of possible or probable abandonment of all or portions of the railroad has had an unfavorable effect upon the desire of present patrons to continue to use the railroad to the present or even greater extent," and "has discouraged new industries from settling on the line and adding to the number of shippers and to the diversification of commodities handled."

His report also called attention to other problems confronting the railroad, such as the effect on operating costs of working rules and state laws, which bear especially heavily on the O. & W. because of its low traffic density. The New York state excess crew law, for example, requires an extra brakeman under certain conditions; while at Oswego a hostler must be paid a full day's wage for turning the locomotive of the *one* daily train.

On the other hand, to offset these and other difficulties Professor Kessler found a number of favorable factors, among them that:

(1) Service, on the whole, is satisfactory;

(2) Management is very desirous of fulfilling its obligations;

(3) "Most employees" are carrying out their duties faithfully and well; and

(4) Complete dieselization — achieved in 1948 — has increased efficiency of operations, has helped to overcome the disadvantage of relatively steep grades, and has made possible much better control of expenses.

The N.Y.O. & W., providing the only rail service in some 75 communities, is too important, Professor Kessler concluded, to be abandoned, if any way can be found to keep it in operation. Any plan of breaking it down into several short lines, or of splitting it up among neighboring railroads, appears to be unbalanced and undesirable, if any other solution can be found. Reorganization on any "cooperative" basis seems impracticable.

But its continued operation as an independent company appears to require a number of specific steps, particularly, says Professor Kessler:

(1) To make definite, "as soon as possible," whether it is to continue — "the existing state of uncertainty is depriving the railroad of permanent traffic possibilities, injuring employee morale and harming relations with other carriers" and with shippers;

(2) To increase traffic, particularly through reduction of traffic balances owed to other roads, elimination of prepay orders [now at least partially accomplished] and expansion of the traffic department; and

(3) To reduce expenses by leasing or purchasing freight cars in order to reduce per diem payments, by improving track structure to speed up service, and by attempting to obtain new capital to cut down traffic balances and other obligations, and to improve the physical condition of the property.

What the Committee Has Done

It was to assist the management of the road in attaining these objectives that the Eleven-County Consolidated Committee was organized. Under Mr. Leland's direction it inaugurated a vigorous campaign to increase business all along the line. County chairmen appointed local committees to assist in their respective communities. Efforts were made to encourage routing of shipments via the O. & W., and to secure for it the benefit of the longest possible haul on its own rails. New industries were sought for location along the line. Efforts were made to make people in the line's territory aware of its importance to them and to their communities. Local businessmen wrote to their suppliers, asking that shipments to them be made, so far as possible, over the N.Y.O. & W.

Traffic Revenue and Ratios—N.Y.O. & W. and Four Neighboring Roads

	N.Y.O. & W.	C. N. J. - C. of Pa.	D. & H.	D. L. & W.	L.V.
Main-track mileage operated	544	622	794	968*	1,254**
1950 (tentative)					
Freight revenue per mile of line	$12,098	$81,019	$64,401	$66,898	$51,428
Total operating expense per mile of line	$11,594	$76,248	$53,067	$66,179	$43,896
Transportation ratio	47.2	42.2	38.0	43.8	40.0
Operating ratio	88.8	79.5	76.8	77.7	76.8
1949					
Ton-miles of revenue freight per mile of line	773,105	3,526,049	5,168,189	4,082,316	3,417,441
Average revenue per ton-mile (cents)	1.46	...	1.12	1.62	1.45
Freight revenue per mile of line	$11,277	$72,937	$58,034	$66,258	$49,370
Total operating expense per mile of line	$11,337	$72,310	$52,205	$67,134	$45,187
Transportation ratio	48.0	44.8	41.8	45.1	43.7
Operating ratio	91.1	82.4	83.4	80.8	81.8
1948					
Ton-miles of revenue freight per mile of line	947,976	4,653,995	6,999,513	4,931,268	4,168,176
Average revenue per ton-mile (cents)	1.40	1.85	1.01	1.53	1.37
Freight revenue per ton mile of line	$13,268	$86,664	$70,845	$75,394	$57,268
Total operating expense per mile of line	$13,665	$82,477	$58,582	$70,827	$50,976
Transportation ratio	50.8	43.1	38.2	43.4	44.0
Operating ratio	93.4	80.0	77.3	75.3	79.7

*967 in 1950 **1,247 in 1950

Public officials addressed letters and petitions to the federal court having charge of the road's reorganization, asking that it be kept in operation.

One county chairman made a survey of the number of people directly or indirectly dependent upon the O. & W. as a source of income; another asked for opinions and received a flood of letters containing both complaints and praise about its service — a major proportion of them, incidentally, attested to excellent service in spite of many handicaps.

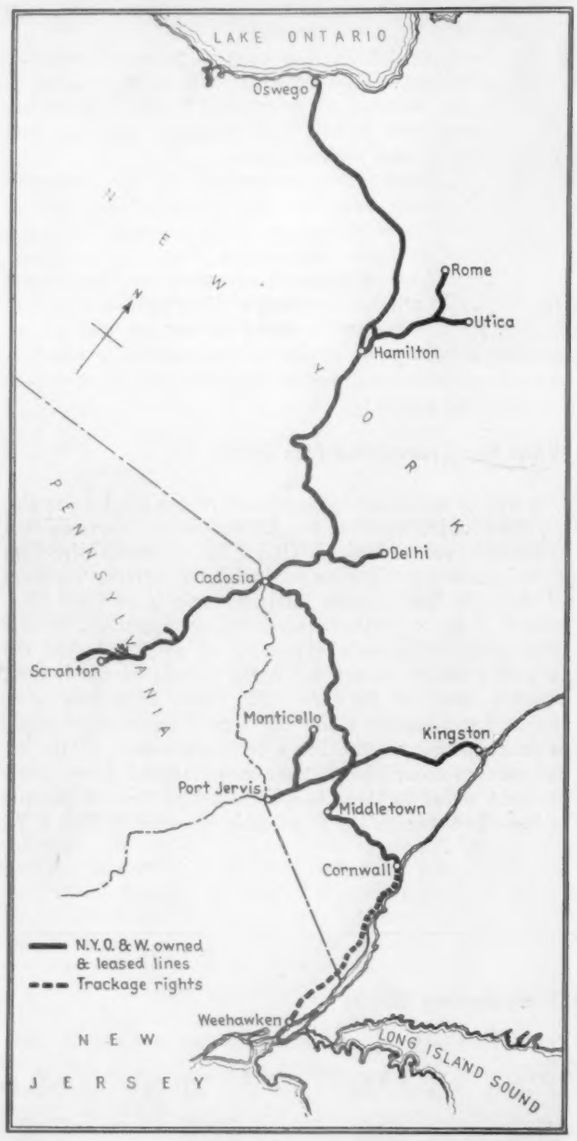
There have, so far, been some definitely encouraging results. In a recent "O. & W. Newsletter," for example, Mr. Leland informed his committee members that "Business is on the up and up! Revenues are rising." And, just as important, "The problem of adverse traffic and car service balances may be on the road to solution. . . . We have been informed by N.Y.O. & W. management that present current obligations to other carriers [for traffic balances and per diem] are being met."

"Steps are being taken," he pointed out in the same letter, "to reduce expenses" — by eliminating watchmen at crossings where automatic signals and gates appear to be sufficient; by limiting passenger service to the three summer months [now accomplished, at an estimated saving of $100,000 a year]; and by various personnel changes.

A beginning has been made, too, toward expansion of the traffic department by addition of an extra man in the Chicago office "to help take care of the important matter of bridge traffic."

All in all, the committee chairman was able to conclude his letter on the hopeful note that "in spite of rumors from certain quarters outside of the railroad, I am sure the N.Y.O. & W. is *not faced with abandonment.* The combination of increased traffic as the result of favorable business conditions, a renewed interest and even enthusiasm over the railroad among shippers and employees, and a sincere desire on the part of top management to accede to constructive criticism convinces me that the line really has a future and that it is going to live up to its new slogan — Now Young, Out & Working. We must not forget the usefulness of the line during the last war in handling explosives, grain and petroleum — and we are doing our best to keep our government reminded of that fact now! Let's keep working together. What helps the N.Y.O. & W. also helps you and your community!"

Whether or not Mr. Leland's prediction will come true —whether or not shipper enthusiasm plus management efforts can in the long run overcome adverse economic forces—time alone can tell. The significant aspect of the committee's work is that a group of shippers, faced with an economic problem, are trying to solve it by their own cooperative efforts, and by economic, rather than legalistic, means.



Now primarily a bridge line, the N. Y. O. & W. received 69 per cent of its 1949 freight traffic from connecting carriers, and originated 31 per cent. A large part of its traffic is received in the Scranton area and is delivered to the New York, New Haven & Hartford at Campbell Hall, just east of Middletown, for New England destinations. The Oswego area, and the Rome-Utica branches, are important traffic sources, while the line is also carrying a large quantity of construction material for New York City water supply dams now being built along the Kingston branch. Principal commodities carried in 1949 were anthracite coal, animal and poultry feed, bituminous coal, broken stone and rock, cement, iron and steel and miscellaneous mill products

January 1951 figures, which have become available since this article was prepared, indicate an increase in freight revenue per mile of line, and show that the N.Y.O. & W. had net railway operating income for the month of $32,969, against a deficit of $124,244 in January 1950.

"Congress has passed a law which enforces the union shop in American railroads. This means that the American citizen has lost another liberty. From now on, he cannot work in the railroad industry beyond a few days, unless he belongs to a private organization. Such private unions cease to be purely private when membership in them is compulsory. Voluntary association merits encouragement, but question must be raised whether government in a free society should ever require membership in such, as a condition of employment. Arguments on the closed shop are not all on one side. But, after fully weighing them, it is very difficult for a true believer in human freedom to also believe in the closed shop. The closed shop makes a prisoner of a worker to a greater or lesser degree. If he finds union restraints intolerable, or if he gets on the outs with a local or national labor leader, his life may become very difficult. He cannot express his dissent by resigning from the union unless he is also willing to abandon his occupation. The wise men of the ages have warned us again and again about the loss of liberty through the step-by-step process."—*Chamber of Commerce of the United States.*

Shipments arriving in open top equipment must have a lot of blocking, strapping and paper covering to protect them from cinders, rain and the shocks encountered in transit. Here's what remained in one car after unloading . . .

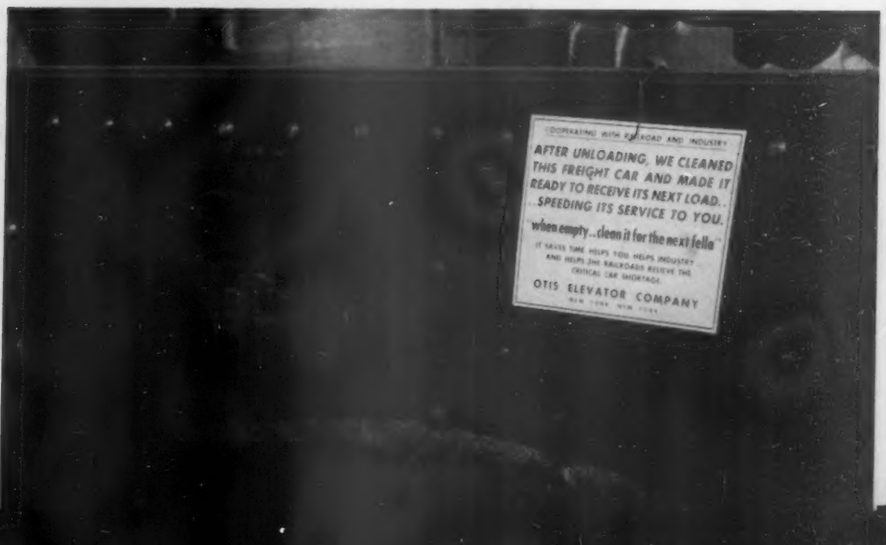
Otis Cleans and Placards Gondolas Too

What the Otis Elevator Company does about cleaning cars which it unloads, and why its practice is profitable to that manufacturer, was reported in *Railway Age* of March 5. That article dealt only with box cars. As the accompanying illustrations show, Otis Elevator applies the same principles when gondolas are unloaded.

. . . but it didn't stay there long. After the car was cleaned placards were attached . . .

The man behind Otis's car cleaning program is C. E. Coyle, the company's general traffic manager

. . . stating Otis Elevator policy and urging cooperation of railroads and other shippers in overcoming the dirty-car problem


COOPERATING WITH RAILROAD AND INDUSTRY
AFTER UNLOADING, WE CLEANED THIS FREIGHT CAR AND MADE IT READY TO RECEIVE ITS NEXT LOAD. SPEEDING ITS SERVICE TO YOU.
when empty...clean it for the next fella
IT SAVES TIME, HELPS YOU, HELPS INDUSTRY AND HELPS ONE RAILROADS RELIEVE THE CRITICAL CAR SHORTAGE.
OTIS ELEVATOR COMPANY
NEW YORK, N.Y.

President
FRANK J. ARMSTRONG, T.M.
United States Radiator Corp.
Buhl Building
Detroit 31, Mich.

Vice President
FRANK H. CROSS, A.D.T.
General Mills, Inc.
Minneapolis 1, Minn.

Vice President
ARTHUR P. LITTLE, G.T.M.
Dennison Manufacturing Co.
Framingham 12, Mass.

National Secretary
JOHN N. LIND, A.G.T.M.
The National Supply Company
Pittsburgh 30, Penna.

NATIONAL ASSOCIATION OF SHIPPERS ADVISORY BOARDS
IN CO-OPERATION WITH AND ADVISORY TO
ASSOCIATION OF AMERICAN RAILROADS
(CAR SERVICE DIVISION)
HEADQUARTERS: BUHL BLDG., DETROIT 31, MICH.

WHAT CAN I DO?

Well, if it's your job to ship goods—use that extra ounce of prevention. Look over the packages your company is sending out; look at the stitching, marking, taping, and mailing of boxes and ask yourself "Is this the best we can do?" Consider how your products are packed in their containers. Are you using the best methods and materials for reducing damage from handling and shipment?

And if your job includes loading cars or trucks, study methods of stowing your products so that they will reach your consignees in better condition. In this connection I am reminded of the recent experience of grape growers out in California. A few years ago these growers stowed their cases of grapes in refrigerator cars lengthwise to the car, then someone discovered that by stowing the cases crosswise to the car they could reduce damage. So they changed their methods of stowing, and now in-transit breakage has been reduced from 21.9 per cent to 4.9 per cent.

If you receive freight which has not been properly packed or loaded, tell the shipper so he can do better next time. If you don't tell him, how will he ever know that he isn't doing it right?

But maybe you work for a railroad, and your job is to handle freight or to supervise those who handle it. Remember that the freight which you handle is not yours, and everything broken or damaged must be repaired or replaced. Sad experience has shown that all too often, this runs into lots of money—currently about $300,000 a day—a high price for a little carelessness. It takes a great deal of freight handling to pay for it. Just because rough switching, or poor car maintenance, or improper handling does not produce immediately visible evidence of great damage, doesn't mean there wasn't any done. Or because the blame can't be irrevocably pinned on you personally, don't get careless. You wouldn't throw your own furniture around the house—why throw other's? Nor would you drive your auto up against the end of the garage to stop it. Damage claim prevention is your job—it's everybody's job.

Shippers have done much to reduce their causes of loss and damage. They appreciate all that you railroaders are doing, but in view of the mounting loss and damage claims, they think you should be doing even more. If I were a railroad man, it would be my aim to demonstrate that I can meet, or even exceed, every effort by shippers to reduce loss and damage by doing an increasingly better job of handling. You are a quality worker only if you put into your job everything that training and experience has taught you.

A. H. Schwietert

Chairman, National Management Committee
National Shippers Advisory Boards

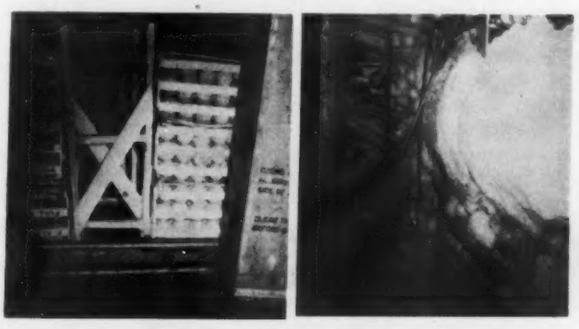
The Case of the Up-Ended Melons

How research in specific commodities whittles down claims

Every commodity is different. What causes damage to a carload of fresh fruit will leave canned goods untouched. What harms grain does not affect porcelain. And so on. Recognizing this fact, shippers and the railroads have been pushing research in specific commodities aimed at reducing damage in transit. The Freight Claim Division of the Association of American Railroads currently employs four commodity engineers who work full time studying the problems peculiar to the shipment of canned goods, grains, perishables and ceramics, respectively. These men are in addition to the division's regular corps of loss and damage experts. Shippers of specific commodities — like enameledware, canned goods and television equipment—have also joined in common cause to study their respective products.

An example of what this type of cooperative research can accomplish is found in the experimental work now going on in the shipment of cantaloupes. This commodity—being studied jointly by the perishables engineer of the A.A.R. and several shippers—is normally subjected to much concealed damage (bruising). Analysis indicated that most of the concealed damage resulted from the way the crated melons were loaded in refrigerator cars.

Once the exact causes of the trouble were determined, it was possible to devise a method of loading which avoided two principal causes of trouble.



The commonly accepted method of loading crated cantaloupes is shown in the two views above. Here the crates are loaded parallel to the length of the car. In the left-hand view, the lading is properly fortified with diagonal bracing, but the bowing of the bottom slats in the crates has bruised the melons. (The slats can bow, without breaking, sufficiently to let one or two melons escape.)

On the right the two end stacks of crates have absorbed the shocks of transportation, with the result that the crates in these stacks were forced out of shape, spewing their contents. The flexibility of the lengthwise slats in each crate also make it impossible to squeeze the load and hold it tight.

As a result of cooperative research, the crates are now loaded on end, with a well-constructed doorway brace. This method of loading places the crates in the car in a position where the panel ends (the strongest part of the crate) absorb the shocks of transportation. It has been found that this load can be squeezed tight when loaded, and that it will stay tight through to destination.

With the crates loaded on end, the melons do not settle in the crates, as might be supposed. Tests show that in properly packed crates, when stood on end, it is possible to remove the bottom melons without the top melons falling down, indicating that the pressures on each melon are well distributed.

The new method of loading melons also solved another problem common to the handling of all fruits and vegetables—inspection by commission agents and buyers at stop-off points. It is the practice of these prospective buyers to enter a car and evaluate its contents for size, quality, ripeness, etc. In so doing, they often open the crates on the top of the load, and neglect to close them upon completion of their inspection. As a result the car arrives at its second stop-off point looking a little the worse for wear. The next batch of buyers repeat the process—opening still more crates. By the time the car reaches its final destination, the top of the lading is apt to be a little "roughed up." Now, with the crates stowed on end, it is not easy for these buyers to leave opened crates. The crate must be pulled out of the load before it can be opened and sealed before being replaced.

This example is but one of many: The ceramics engineer of the A.A.R., working together with the Shippers' Committee of the Porcelain Enamel Institute, have developed ways of reducing damage on this type of easily damaged merchandise. (See *Railway Age* of February 18, 1950, page 52.) Shippers and carriers working together have developed better ways of handling newsprint. The work of the furniture manufacturers in developing improved techniques to reduce their loss and damage claims is well known. The list is large. The results of claim prevention research work *based on commodities* are encouraging further efforts to apply this technique to the mutual advantage of carriers and shippers.

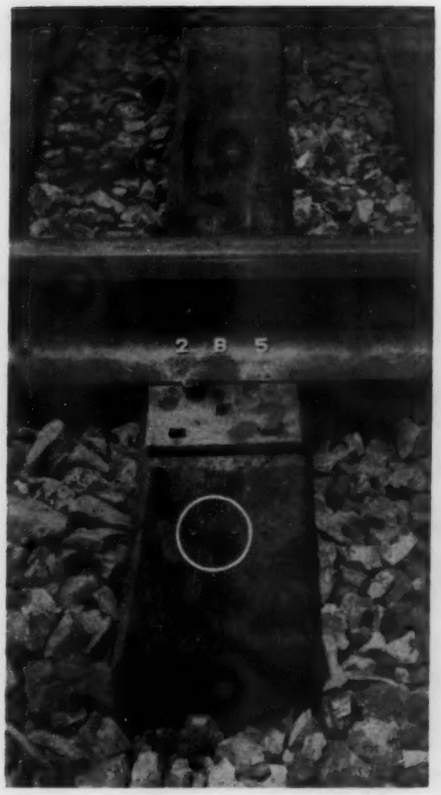
New streamlined methods have reduced the seasoning and creosoting period of Norfolk & Western crossties from months to about the 15 hr. 40 min. schedule of the "Powhatan Arrow" for its 677-mile run between Norfolk and Cincinnati

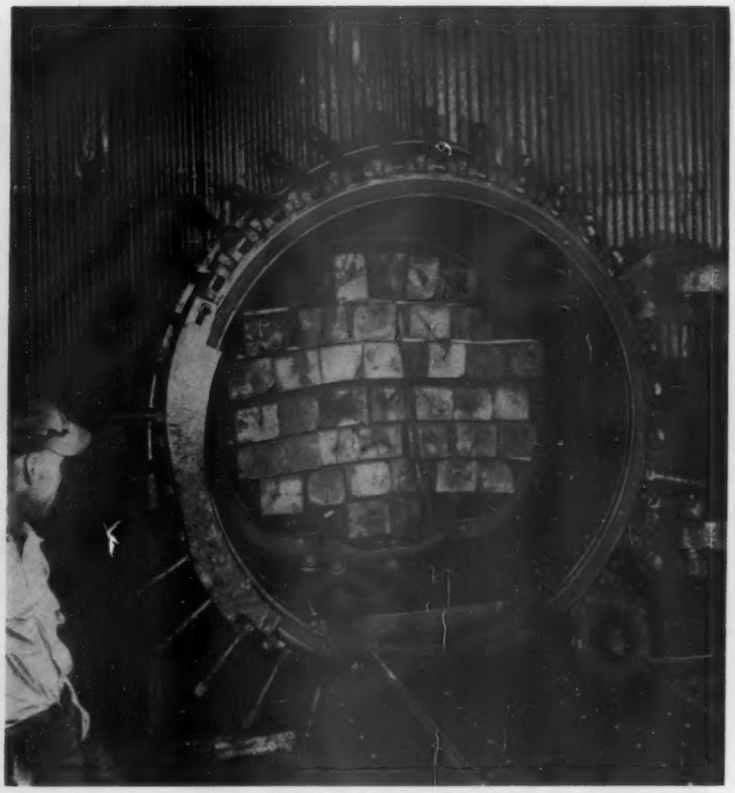
Norfolk & Western Expects Longer Service Life from Crossties

Now being treated by a new process at its wood preserving plant because vapor-drying cuts seasoning time from months to hours, reduces checking and splitting and provides deeper penetration and more extensive distribution of the preservative

Any doubts that may have occurred to the railway officers responsible for the installation and operation of Norfolk & Western's new vapor-drying unit at its Radford, Va., wood preserving plant have been dispelled by results obtained during the first nine months of operation.

"Yes, indeed," said A. B. Stone, chief engineer, in reply to the first of many questions raised by a *Railway Age* representative during a recent visit, "we're really satisfied. More than 100,000 crossties that were vapor-dried and creosoted during the first nine months of operation





Left—Track tests like this have convinced N. & W. engineers that checks in vapor-dried ties do not progress in service. Copper nails (in white circle) are used for periodical caliper measurements. These ties were processed at Taylor-Colquitt's Spartanburg plant and were placed in track in the summer of 1947. Right—Vapor-drying removes approximately 3,000 gal. of water from an average dryer charge of some 650 crossties, depending upon the initial moisture content of the wood. The moisture content is reduced from 42 to 45 per cent before creosoting

measure up to our expectations. The new process not only reduces the seasoning period from months to 12 hours but the ties are also preservatively treated during their stay in the cylinder. The entire operation is completed in about 17 hours. Our close observations of vapor-dried ties that have been in service in a test track on the Southern for seven years, as well as extensive observation of ties processed at Radford since last April, lead to the conclusion that vapor-drying will add a minimum of two years to their service life.

"Two years additional service will more than pay for the extra cost of vapor-drying and according to present indications the two-year minimum will be exceeded," said Mr. Stone. "We look to longer service life," he added, "because vapor-drying drastically reduces checking and splitting ordinarily experienced during the air seasoning of our oak and mixed hardwood ties prior to creosote treatment. Our observations also show that the checks and splits in vapor-dried ties that have been in service for seven years, do not progress. Ordinarily there is an appreciable progression of checks and splits in air-seasoned ties that have been in track for similar periods.

"This is a very important point," Mr. Stone added, "because we all know that once these splits and checks proceed beyond the area of protective treatment untreated wood is exposed to rot. This in turn reduces service life considerably because these ties must be removed from track long before their normal period of service."

Railway officers in charge of engineering, maintenance of way and the procurement and treatment of ties and other forest products, as well as the officials of commercial wood preserving companies and several technical associations, have been eyeing vapor-drying for some time. Naturally they have been watching developments at the Norfolk & Western plant with considerable interest, because the Radford plant is the first full-fledged wood preserving plant in this country to be licensed under the vapor-drying patent. Placing it in service followed closely on the heels of Taylor-Colquitt's parent plant built for commercial purposes at Spartanburg, S. C.*

Low production of crossties throughout almost all sections of the country and sharply increased prices of the finished product, not to mention greater costs for track labor, headline the importance of longer service life for crossties. Competitive prices for lumber have not only forced up prices for crossties but much of the standing timber that might have been spotted for ties is now being sawed into lumber because of better prices. Many railway procurement men are wondering where their tie requirements are to be met. Add to this the necessity of 6 to 14 months (depending on species and other conditions) for air-seasoning ties prior to creosote treatment, and you have a better conception of today's problems of production and procurement. Particularly in instances of this kind, vapor-drying certainly presents a practicable means of speeding up production.

The advantages of the new process are not limited to these considerations alone. R. D. Simpson, maintenance

* A description of the Spartanburg plant appeared in *Railway Age* of April 22, 1950, page 59, while the vapor-drying process was the subject of a two-part article in *Railway Age* of March 9 and March 16, 1946.

Probably the most elaborate wood preserving control room in the country and the only one with a picture window. Tiled and pressurized as a safety measure, it is replete with the latest in instruments. Even the time cycles of the twin treating cylinders are mechanically operated and controlled

engineer, and W. E. Kemp, superintendent timber preserving plant, furnished many of the following data as the *Railway Age* observer watched "overnight" timber seasoning in process. Among the several advantages that Norfolk & Western expects to gain as a result of adopting vapor-drying and revamping its treating plant are:

1. A very substantial reduction in the yard stock of green ties;
2. A consequent reduction in taxes and insurance premiums;
3. Elimination of considerable track and yard maintenance at the plant;
4. The virtual elimination of the use of anti-splitting devices;
5. Reduction in yard labor costs through the elimination of one handling of ties from revenue cars to air-seasoning stacks; and
6. Better penetration and distribution of creosote throughout the ties during subsequent preservative treatment, a result of the deep penetration of the vapor-drying agent.

During the past five years Norfolk & Western has inserted in track an average of 516,720 crossties annually. Air-seasoning required yard stocks ranging from 600,000 to 1,000,000 green crossties, approximately two years' insertions. With the introduction of vapor-drying in April 1950, treatment has progressed at the rate of 60,000 to 70,000 ties per month and untreated stock has been whittled down to approximately 225,000 ties. During the transition period, vapor-drying has been stepped up gradually from about 12,000 crossties processed last May to approximately 15,000 per month at present. Many of these ties had been air-seasoned for three or four months.

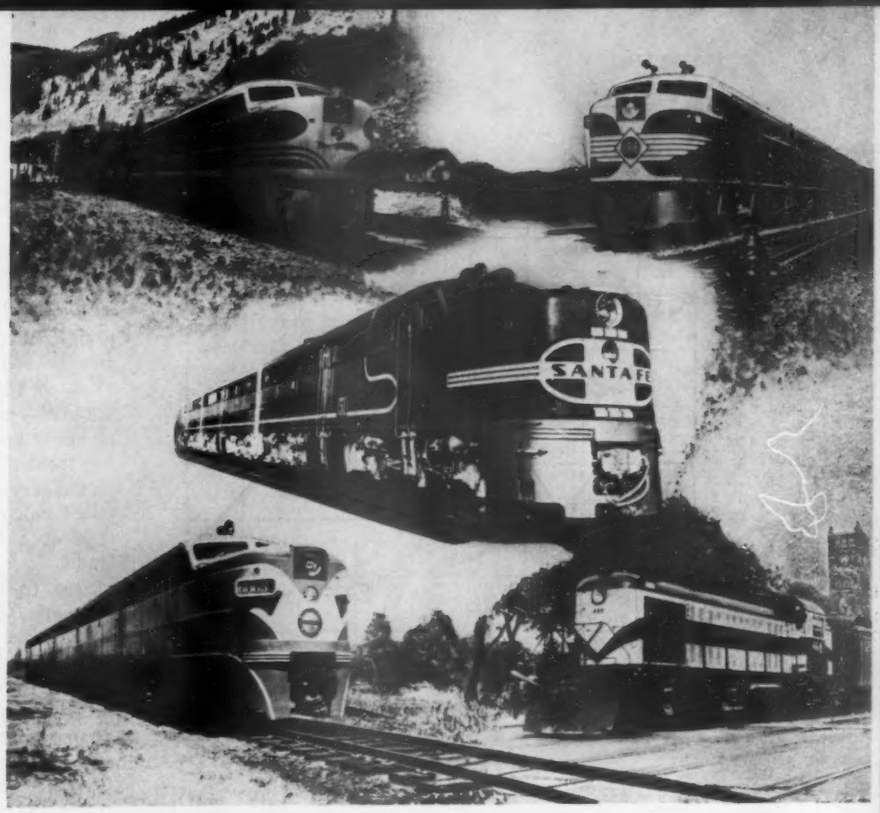
As time goes on it is anticipated that an entirely new cycle from stump to treated product will be developed. Not only will the number of green ties in the yard be lowered, with substantial reductions in investment and insurance premiums, but vapor-drying also opens up new avenues for the introduction and use of more efficient mechanized handling operations.

All Norfolk & Western ties are produced on line. Approximately 85 per cent are mixed oak and the remainder are beech, birch, maple and gum. Because of careful handling and treatment the N. & W. reports excellent service from gum. Close observation of gum ties in test track since 1921 form the basis of this opinion. Furthermore, because there are substantial stands of this species in close proximity to Radford, and since the vapor-drying presents a ready means for overcoming the susceptibility to early decay of both black and sweet gum, it is anticipated that an added impetus will be given to increased production of these species.

Of 106,118 vapor-dried crossties processed at the Radford plant, only four were discarded because of splits and checks. With air-seasoning it has been the practice to use four crinkle "C" irons per tie. This procedure has been eliminated in conjunction with green ties intended for vapor-drying. Furthermore, field tests involving the use of micrometer readings on vapor-dried ties in track show that checks and splits progress very little if any compared to substantial progression of splits and checks on the ends and surfaces of air-seasoned counterparts.

Outline of a method by which a railroad may predetermine its motive power needs accurately before the locomotives are purchased

By C. D. NEITHAMER
and T. J. MARCH
Locomotive and Car Equipment Divisions
General Electric Company
Erie, Pa.



Modern locomotives should be scientifically applied to obtain best results and maximum operating economy

Application of Motive Power to Railroad Service

Motive power expense represents 40 to 50 per cent of all railroad operating costs and hence merits careful scrutiny. The industry in its continued efforts to increase efficiency has found a powerful tool in the modern diesel-electric locomotive, with its low operating cost and remarkable performance ability. However, the benefits of any form of motive power can only be fully realized on the basis of proper initial application. Experience has shown that the savings effected are largely determined by how thoroughly the application is studied before the locomotives are purchased.

In the case of steam motive power, such studies have generally been made *after* the purchase of the locomotives. By means of a dynamometer car and test train, the hauling capacity of the newly acquired engines under various conditions was determined. In contrast to this, it is now possible to *predict* the specific performance of electric-drive locomotives on any given railroad application by the use of accurate analytical methods. Proposed operation can be compared with current practice. Accurate estimates of the type and number of locomotives required and of the expected savings can be made in advance of any commitment on the part of the railroad.

Theoretically, any railroad could make its own application studies prior to purchasing motive power. However, two disadvantages of this procedure are quickly apparent. First, application studies on any one railroad are usually of infrequent occurrence. Therefore, they would tend to disrupt the regular routine of the engineering staff, and also might require an extension of engineering facilities otherwise not economically justified. Second, additional time above that necessary to make the survey would be required to familiarize the railroad engineering staff with all the characteristics of each proposed locomotive. On the other hand, the locomotive builder is thoroughly familiar with his product. Furthermore, he can keep a specially trained survey staff fully occupied on a national scale. It is only logical, therefore, that the railroad be relieved of the burden of application surveys. However, in assuming this task, the manufacturer must be conscious of his responsibility to protect the purchaser's interest, not only from the technical side, but also from the standpoint of overall economics.

Selection of Locomotives

A thorough application study answers the following questions asked by railroad management:

1. How much will the new locomotive save?
2. How rapidly will they pay for themselves?

In addition, the study must answer the two questions of the operating department:

1. How many locomotives will be needed to handle the traffic?
2. What weight of train can be hauled, and on what schedule?

In making this survey, the operating problem is handled first, using the following procedure:

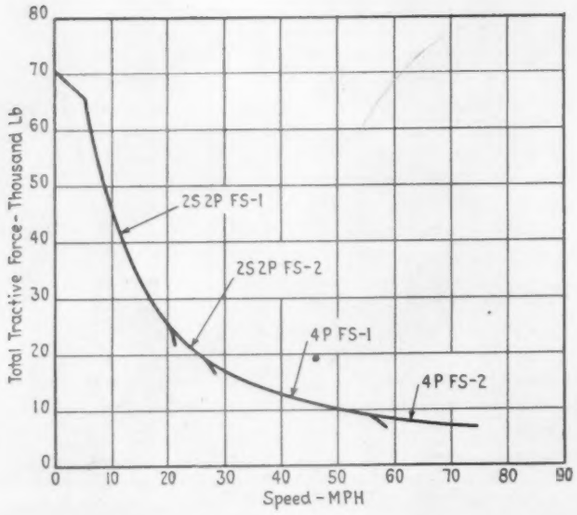


Fig. 1—Speed-tractive force curve for an Alco-G. E. 1,600-hp. diesel road freight locomotive, with 75-m.p.h gearing

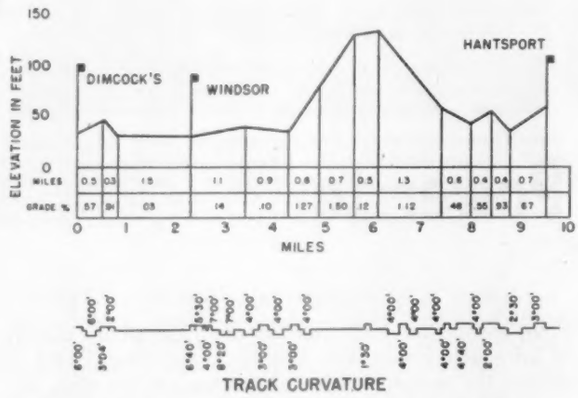


Fig. 2—Sample railroad profile

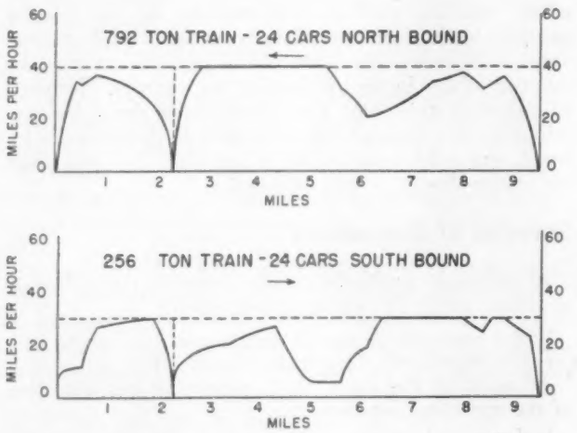


Fig. 3—Typical speed-distance curves for north- and south-bound runs

1. Measure the job the locomotives will have to do.
2. Select the proper locomotives for the job.
3. Determine the number of locomotives required.

The first point requires that the traffic be accurately measured. A copy of the employee's timetable for the route under study is used. It indicates the schedule speeds of all regular runs and therefore defines the minimum performance expected of the new motive power units. It may be found that the new motive power will eliminate some of the existing restrictions, permitting more economical operation. In addition, this timetable indicates all speed restrictions, the number of stops, passing points for trains, if required, and tonnage ratings of existing locomotives. All this information is valuable for the detailed calculations that will follow.

Most railroads experience annual periods of peak traffic. It is necessary to determine the motive power required to handle this load. For this purpose, the dispatcher's records for the route being studied are examined. From them, a list is prepared showing the average number of trains, their weight, and also the number and weight of trains at the peak load period. The proper preparation of such a list requires detailed work and close cooperation between the railroad operating department and the survey engineers.

The proposed locomotives may be able to haul heavier trains than are currently operated. In that case, further analysis and discussion with the railroad operating officers may be necessary to determine the maximum size train to be handled.

In dealing with the second point, selection of the proper locomotive, two limiting factors are considered:

1. Tractive force necessary to handle the maximum train on the ruling grade.
2. Horsepower necessary to pull the maximum train at scheduled speed.

The tractive force required may first be checked in a preliminary way. As an example, consider a maximum train weight of 4,000 tons and a ruling grade of 1.2 per cent for a length of three miles.

Calculations are begun by assuming a locomotive basically satisfactory for the job. In the example, conditions indicate three 1,600-hp. diesel-electric freight-passenger units. The required tractive force is:

Required tractive force = (Weight of locomotive + weight of train) × (Grade resistance + curve resistance + train resistance)

For preliminary calculation, the train and locomotive are considered to have the same specific resistance. Then:

Weight of train.....4,000 tons
Weight of locomotive...3 units × 120 tons per unit = 360 tons
Grade resistance .....1.2 per cent × 20 lb. per ton = 24 lb. per ton
Curve resistance .....5 deg. × .8 lb. per ton per deg. of curve = 4 lb. per ton

(Five-degree curvature is taken as a reasonable estimate of the effect of curve resistance in this section.)

Train resistance 4.8 lb. per ton at 10 m.p.h. (As a starting point, the speed of the locomotive at the continuous tractive force rating of the motors with 75 m.p.h. gearing is used, in this case 10 m.p.h. at 46,000 lb. as shown in Fig. 1.) The value of 4.8 lb. per ton for the speed of 10 m.p.h. is obtained from Davis train resistance curves for freight cars with 4-wheel trucks and an average weight of 40 tons.

Required tractive force = (4,000 + 360) × (24 + 4.0 + 4.8)
= 4,360 × 32.8
= 143,000

The continuous rating of three American Locomotive-

General Electric 1,600-hp. units with 75-m.p.h. gearing = 3 × 46,000 or 138,000 lb. This is less than the required tractive force. Hence, the locomotive can operate at the 143,000-lb. tractive force for a limited time only. Since this is a short-time rating, the length of time the locomotive will be operating at this load must be checked.

Reference to the locomotive speed tractive-force curve (Fig. 1) shows that the speed at 47,667 lb. tractive force per unit (143,000 lb. for the locomotive) will be 9.4 m.p.h.

$$\text{Time (min.)} = \frac{\text{Distance (miles)} \times 60}{\text{Speed (m.p.h.)}}$$
$$= \frac{3 \times 60}{9.4}$$
$$= 19.1 \text{ minutes}$$

For the proposed locomotive, this is within the short-time limit of 157,500 lb. for 12 minutes, so the locomotive can safely handle this train on the ruling grade.

While the above calculation is only preliminary, it serves to indicate the approximate size and type of locomotive required. In the next step, more involved calculations centered about this roughed-out locomotive take into account momentum, actual curves, exact train resistances and all other related factors.

Additional elements are, of course, involved to a varying degree in the final selection of a locomotive. These are:

1. Axle loading limitations imposed by rail weight, track condition and bridges.
2. Physical limitations imposed by bridges, tunnels, platforms, passing tracks and curves.
3. Dual-service considerations such as the possibility of using combination road freight and passenger units or road-switcher locomotives.

The next question to settle is whether the proposed basic locomotive that satisfies necessary tractive-force requirements can handle the maximum train in scheduled time. At this point, a detailed profile of the route under consideration is studied to determine all grades and curves. Then, using formulas for acceleration, speed, time and distance, curves of speed versus time and speed versus distance are calculated and plotted for the proposed locomotive and train. Samples of such profiles and curves, taken from A.I.E.E. Technical Paper 49-42, by G. T. Bevan, Alco-G.E. Division, General Electric Company, Schenectady, New York, are shown in Figs. 2, 3 and 4. The speed-time curve indicates the train speed at all times during the scheduled run. The speed-distance curve shows the train speed at every point on the scheduled run. Fuel consumption is now calculated. It is the product of rail horsepower-hours of operation multiplied by the gallons of fuel oil used by the proposed locomotive per rail horsepower-hour. A figure of .075 gal. per rail hp.-hr. is used for all types of Alco-G.E. diesel-electric motive power.

A further indication of locomotive performance over the selected run is obtained by calculating the load factor, i.e., the ratio of average rail horsepower exerted to the maximum obtainable horsepower expressed in per cent. All calculations are made on the basis of observing the safety regulations, and speed restrictions indicated in the employee's timetable.

The third point of the operating problem—the number of locomotives required—is now considered. This is largely influenced by the utilization that is made of the motive power. A major advantage of the diesel-electric locomotive is its high availability. If this characteristic is fully exploited, the result will be the most economical application. Some of the elements to be borne in mind at this point are:

1. Arrange schedules for minimum terminal layovers.
2. Consolidate trains where practical.
3. Investigate the possibility of splitting a locomotive into smaller units in cases where the train splits at junction points.
4. Use all-purpose locomotives where conditions permit.
5. Use A-units at each end of locomotive to avoid turn-arounds.
6. Eliminate helpers where possible.

A first approximation of the number of locomotives required can be obtained by dividing the annual gross ton-miles hauled over the route under study by the gross ton-miles handled by one locomotive. This annual figure is then carefully analyzed further and translated into the number of locomotives required per day. In addition, the maximum tonnage trains that can be started and stopped between points on the route are calculated.

After the technical and operating questions have been fully investigated, it is possible to provide accurate answers to railroad management questions: How much will the new locomotives save? How rapidly will they pay for themselves?

Usually surveys present the benefits to be realized from dieselization in terms of gross return on investment. To do this, savings in operating expense expected from the motive power are determined and stated as a per cent of the capital investment required.

To maintain a realistic approach to this estimate, certain savings and expenses are not considered in the survey. Savings not included are:

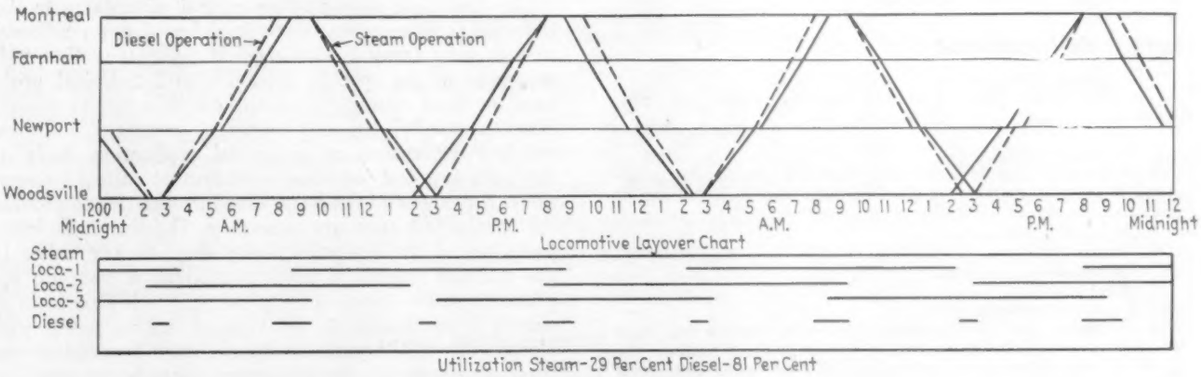

Montreal
Farnham
Newport
Woodsville
Diesel Operation
Steam Operation
1200 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12
Midnight A.M. P.M. A.M. P.M. Midnight
Locomotive Layover Chart
Steam
Loco-1
Loco-2
Loco-3
Diesel
Utilization Steam-29 Per Cent Diesel-81 Per Cent

Fig. 4—Graphic train sheet for steam and diesel-hauled trains. Layover times for three steam and one diesel locomotive are shown at the bottom

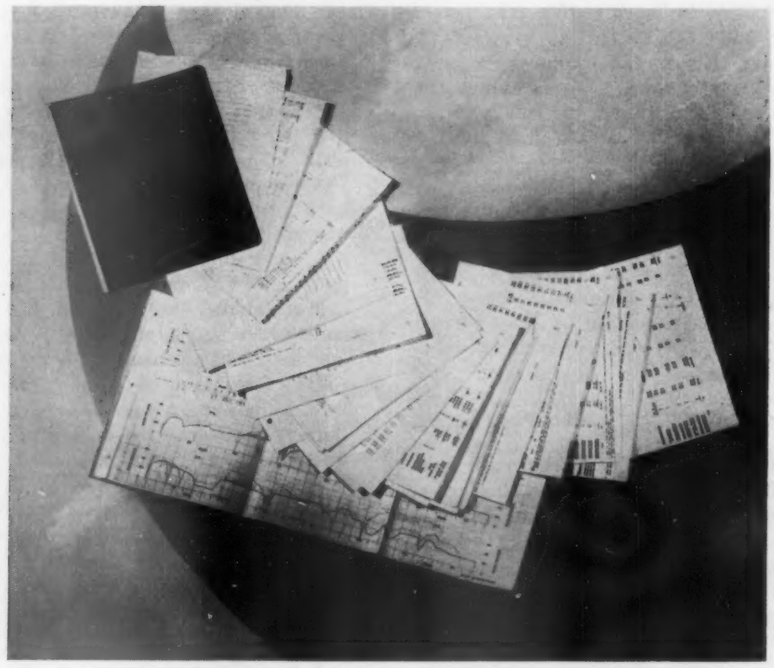


Fig. 5—The motive power survey covers all phases of the problem

1. Reduction in roadbed and structure maintenance due to absence of reciprocating forces in motive power. (Estimated as high as 10 per cent by some railroads.)
2. Reduction in brake-shoe wear when dynamic braking is used.
3. Reduction in expenditure for coal and water handling facilities.
4. Savings due to electric-drive locomotive ratings being practically the same, both summer and winter.
5. Scrap value of motive power replaced.
6. Saving in smoke control equipment.
7. Reduction in claims against railroad for fire damage.
8. Reduction in claims against railroad for damaged lading.

Expenses not normally considered in the survey are:

1. Cost of financing purchase of motive power.
2. Depreciation and obsolescence of the new motive power.
3. Insurance of the new equipment.
4. Federal state and local taxes including sales taxes, capital goods taxes, etc.

Based on past experience, this approach has given reliable results, and the estimates of savings have usually been on the conservative side.

Return on Investment

To obtain the "gross return on investment" figure, eight operating costs are considered:

1. Locomotive repairs
2. Enginemen (pay of locomotive engineers and fireman while engaged in transportation or deadheading; also includes pay of additional shovelers on steam locomotives)
3. Fuel
4. Water
5. Lubricants
6. Other supplies
7. Enginehouse expense
8. Trainmen (pay of conductors, brakemen, flagmen and other employees engaged in transportation service or deadheading; also includes pay of trainmen engaged in piloting trains over home lines).

The Uniform System of Accounts for common carriers, supplied by the Interstate Commerce Commission, facilitates the gathering and standardization of these eight costs by the survey engineer.

The above expenses affected by the change in motive power are listed in detail for both new and old operation, and the savings for each item determined. Gross return can then be calculated. For example, assume that operating expense savings are $2,500,000 annually, and the required investment for the proposed motive power is $8,510,000. The annual return on the investment is then at the rate of 29.3 per cent.

Survey Content

It is only necessary for the railroad to provide three basic items for the survey:

1. Employee's timetable
2. Dispatcher's records
3. Detailed profile.

The analytical survey offers several advantages to the railroad. It is accurate, since it is based upon railroad records kept from day to day. It presents a thorough treatment of the specific economic and technical problems involved in the purchase of the new motive power. The report is brief and its content is presented in logical order. Furthermore, an analytical application study of this sort does not interfere with normal railroad operations. No expensive delays or schedule changes to provide for special test runs are necessary. The thorough interpretation of the operating story that already exists in the railroad records is used to produce a complete application study without cost to the railroad. This form of survey is applicable to any type of motive power with electric drive. Although the diesel-electric locomotive was used as an example, the procedure would be the same for the application of gas-turbine electric or straight electric locomotives.

GENERAL NEWS

I.C.C. Gets Plea for 15 Per Cent Rate Hike

New cost increases cause revision of 6 per cent proposal

The railroads on March 28 filed with the Interstate Commerce Commission a revision of their Ex Parte 175 rate-increase petition, making it a plea for a 15 per cent advance. The proposal supplants the request for a 6 per cent increase previously filed in the proceeding, out of which has already come the commission's March 12 report authorizing interim increases averaging about 2.4 per cent overall (see *Railway Age* of March 19, page 69).

The proposed 15 per cent increase would include the interim advance, i.e., it would raise by 15 per cent the basic rates and charges in effect prior to April 4, the effective date of the interim boost.

The general percentage increase would be subject to maximum increases of 15 cents per 100 lb. on fresh fruits, including citrus fruits, fresh vegetables, and melons, and 10 cents per 100 lb. on sugar and on lumber and articles listed in tariffs taking lumber rates.

Specific increases would apply on coal. They would be: 23 cents per net ton or 26 cents per gross ton on coal rates to and including $1.50; 34 cents or 38 cents on rates from $1.51 to $2.25; and 50 cents and 56 cents on rates of $2.26 and more.

Similar hold-downs and specific increases were included in the original petition which was reviewed in *Railway Age* of January 22, page 31.

That original petition, the present proposal recalled, was based on the railroad's revenue needs "considering January 1, 1951, prices and wages as adjusted to reflect the cost of the December 21, 1950, agreement for settlement of wage and rules cases involving operating employees represented by the four train and engine service brotherhoods." That agreement, signed at the White House by the brotherhood leaders and management representatives, was subsequently rejected by the general chairmen of the unions.

The raising of the rate-increase proposal to 15 per cent was based on cost increases since January 1, including the March 1 agreement, negotiated at the White House, which gave non-operating employees a wage increase of 12½ cents per hour, effective February 1, and escalator-clause arrangements which already entitle those employees to an additional 6 cents per hour effective April 1.

The 12.5-cent wage increase amounts to $292 million a year, while the 6-cent cost-of-living adjustment will add another $203 million, the petition said. And it put at $69.6 million the annual-basis increase in the cost of materials and supplies which has occurred since January 1.

The total increase in annual costs since July 1, 1949, when the latest previous general rate increase became effective, was put at $986.4 million. The petition went on to point out that the interim increase in the present case will yield only $194 million to $219 million a year, according to a commission notice acompanying the decision.

On the basis of estimated 1951 operations, the present rates would result in an annual gross of $9,922.6 million and a net railway operating income of $666 million, a return of 2.63 per cent, according to other figures in the petition. It was also estimated that the 15 per cent increase would raise annual-basis gross to $10,893.6 million, making the net railway operating income $1,180.6 million, a return of 4.66 per cent.

The decision to seek the 15 per cent rate increase was reached at a meeting of chief traffic officers of eastern, southern and western railroads held in Chicago March 22 and 23.

B.R.T. Man Says Dumaine Would "Destroy" New Haven

Frederic C. Dumaine, president and chairman of the New York, New Haven & Hartford, has been "warned" to expect "complete disloyalty of all operating personnel" if the April 1 retirement of J. Frank Doolan, executive vice-president, operations, is not rescinded. (See Railway Officers columns, page 91.) The warning was contained in a telegram sent to Mr. Dumaine this week by James J. Hammill, general chairman on the New Haven for the Brotherhood of Railroad Trainmen.

"Mr. Dumaine, the men of the New Haven will never forgive you for the removal of this official," the telegram said in part. "Not only all our members but nine-tenths of your officials believe that you are attempting for your own personal gain to destroy the New Haven Railroad, as you have done before to many of your enterprises. I promise you that in a few short weeks, although our men live up to every operating rule on your railroad (and believe me we know how your rules read), you will suffer losses that will melt your millions gained in mills and watch factories." [Mr. Dumaine formerly headed the Amoskeag Textile Mills in Manchester, N. H., and the Waltham Watch Company, Waltham, Mass.]

Mr. Hammill reportedly claimed his union has 4,000 members on the New Haven and that leaders of the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Locomotive Engineers have indicated they will participate in any labor "slowdown" on the road. Some operating rules on the New Haven are not rigidly observed, he added, claiming that switching of cars in yards is speeded up by short-cutting rules. One railroad spokesman denied this, saying that all operating rules are being adhered to.

Mayor William C. Celantano of New Haven, Conn., has entered the campaign to have the railroad retain Mr. Doolan. Mayor Celentano, citing Mr.

In the Week's News . . .

HIGHLIGHTS

Teamsters Criticize Truck Regulation in Opposing Rogers 65
I.H.B.-Firemen Agree on Wages 66
1950 Truck Freight Volume Up 25% 66
Loomis Ends Wage Case Testimony 66
Autos "Strangling" Cities—Woods 68
Car Supply Increases Again 74
I.C.C. Studies "Free" Transport 76

DEPARTMENTS

Organizations 80
Supply Service 82
Car Service 84
Equipment & Supplies 84
Construction 86
Abandonments 88
Financial 88
Railway Officers 88

Doolan's "intimate knowledge of the entire New Haven system" and the "respect and esteem that all railroad personnel have for him," asked Mr. Dumaine to "reconsider the retirement of Mr. Doolan at this time."

Senator McMahon, Democrat of Connecticut, announced March 28 in Washington, D. C., that the Senate subcommittee on New England Power and Transportation Problems, of which he is chairman, has started an investigation into the affairs of the New Haven. Other members of the subcommittee are Senators Tobey, Republican of New Hampshire, and Brewster, Republican of Maine.

"There has been some strange business going on," Senator McMahon declared, "and we propose to find out from the Interstate Commerce Commission and our own staff just exactly what the situation is." The subcommittee is a part of the Senate Committee on Interstate and Foreign Commerce.

Senator McMahon said it is imperative for the I.C.C. to see to it that the railroad maintains proper standards to insure the safety of its passengers. He added that he wants the facts about the management of the road brought out into the open.

Monongahela Connecting Back in Operation

An Army order to the Monongahela Connecting, directing payment of a 12½-cent hourly pay rise to 500 members of the Brotherhood of Railroad Trainmen, has ended the railroad labor "slowdown" and strike which closed the Pittsburgh, Pa., plants of the parent Jones & Laughlin Steel Corp. for 12 days (see *Railway Age* of March 19, page 74). Officials of Jones & Laughlin, the nation's fourth largest producer of steel, said the labor tieup had caused a daily loss of 4,500 tons of the metal. The union had been demanding an hourly wage increase of 35 cents.

The railroad is also reported to have signed a new contract calling for a 12½-cent hourly wage increase for 250 enginemen and firemen.

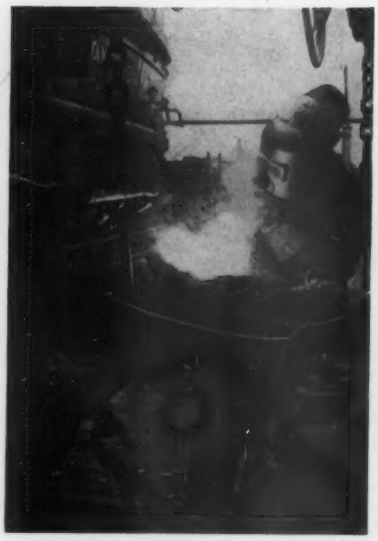
One-Piece Submarine Cable Shipped on Nine Cars

One electric cable, approximately 7½ miles long, and weighing nearly ¾-million pounds, started a 3,000-mile trip across the country on March 22, from the Okonite-Callender plant in Paterson, N. J., to Renton, Wash., where the cable will be transferred to a cable-laying ship. The rail shipment of the single-piece cable was made in nine open-top cars.

The cable is said to be the largest high voltage submarine cable ever manufactured, and will bring power at 25,000 volts under water in Puget sound from Bonneville dam to the San Juan Islands.

At the Paterson plant, the finished cable was fed directly from the armoring machine, which completes the last step of manufacture, on to the nine gondola cars. Approximately 4,400 ft. were coiled into each car, and the cable was then looped over into the next car, coiled, then looped again until the nine cars were filled. To guard against a possible uncoupling, the cars were fitted with safety chains, and the coupler pins tack-welded in place.

To pack each car and protect the cable approximately $500 worth of lumber was required to sheath the car interior, to construct the core for coiling and for roofing. The total cost of packing was $4,500.



Tack-welded coupler pins and safety chains between cars were used as extra insurance against uncoupling

The cable was pulled directly from the armoring machine over a capstan 40 ft. above ground and was coiled in the cars. Each of the nine cars contained 4,400 ft., weighing nearly 85,000 lb.

The nine cars left the Okonite plant on the New York, Susquehanna & Western, and proceeded to Chicago over the Erie. They were transferred around Chicago by the Indiana Harbor Belt to the Chicago, Milwaukee, St. Paul & Pacific for final delivery at dockside at Renton.

DO-97 Won't Work When Allocation Plans Apply

Steel producers have been advised by the National Production Authority that DO-97 ratings on orders for maintenance, repair and operating supplies need not be honored if supplies involved are provided in allocation plans. These allocation plans, of which the freight car program is one, are set up to provide MRO supplies as well as materials for new construction of the equipment covered.

The N.P.A. announcement of the foregoing said steel producers had been "instructed . . . to defer action, pending further notice," on MRO orders for steel "already provided for" in allocation programs.

Producers were also "instructed" to report to N.P.A. "any excessive quantities of steel products covered by DO-97 ratings scheduled for June forwarding, if quantities involved would cause serious dislocation of normal distribution and production schedules."

The DO-97 rating is the defense-order priority which N.P.A. established recently to help keep existing production and service facilities in good repair and operating condition (see *Railway Age* of March 12, page 95).

C. N. Has Always Met Operating Costs—Gordon

Since the Canadian National began operation as an organized system in 1923 it has never failed to meet its operating expenses, Donald Gordon, president and chairman, said on March 17 in Montreal, Que. Speaking to the C.N.R. Staff Service Club there, Mr. Gordon added that he doubted if the C.N.'s success in meeting such expenses is appreciated by more than a handful of Canadians.

"I do not mean to suggest [he said] that our failure to cover interest charges in most years doesn't matter—it does—but I do believe that the nature and origin of these interest charges are not understood and never have been understood by the vast majority of the Canadian people . . . The three big private companies the government was forced to take over were broken down, insolvent and had been kept going only through large advances of public money. All sorts of financial tricks had been practiced by the managements of those railway companies to keep them alive. Expenditures properly chargeable against income had been capitalized, maintenance had been seriously deferred and necessary improvements had been postponed. In short, they were allowed to get into a hell of a mess and in the ordinary course of events there would have been a receivership in bankruptcy in which the fixed charges would have been written down to a point having some reasonable relationship to earn-

ings, or rather the lack of them. This course was not followed because, in general, it was felt it might injure the credit of Canada since, in one form or another, many of the outstanding obligations were guaranteed by the federal government and some of the provinces."

Mr. Gordon added that, all things considered, he believed events have justified consolidating those predecessor companies into a unified system. He does take issue, however, "with the choice of policy which transferred all the debts from the bankrupt companies on to the balance sheet of the newly organized system and required it to shoulder a fantastic burden of interest quite beyond its capacity to pay out of operations."

"When these broken-down railways were grouped together into our present system, the Canadian National . . . was charged with the financial sins of the predecessor companies to the tune of $63,000,000 in annual interest charges, $28,000,000 of them owing to the government. Now there are a great many places where these sins can and ought to be recorded, but I do not believe they belong in accounting records which are supposed to reflect economic values. Essentially, this was the reasoning which lay behind our submissions to the Royal Commission on Transportation which was appointed, late in 1948, to review among other things the capital structure of the Canadian National.

"The effect of present-day methods upon the morale of our company's personnel is bad. It is both disheartening and bewildering for most of us to see our company wind up the year some $60,000,000 to the good on operating results and still owe money. The public has even less understanding of the reasons than do the bulk of our employees and so lies that we are extravagant, inefficient and a drag upon the public purse find fertile ground in which to grow."

[The recently released report of the Royal Commission, including its recommendations for reorganization of C.N. finances, were summarized in last week's issue, page 42.]

Transport's Prime Job Is to Prevent New War

The most important role of transportation today is not winning a new world war but preventing it, Robert J. Bayer, editor of "Traffic World," said recently in San Francisco, Cal., at a luncheon sponsored by the Pacific Traffic Association of San Francisco and held in conjunction with the 84th regular meeting of the Pacific Coast Transportation Advisory Board on March 15-16.

To accomplish this goal, Mr. Bayer added, our industrial machine must be kept in high gear through constant alertness of workers and management, and users and producers must conduct their everyday jobs so as to maintain our transportation system on the highest level of effectiveness. The prime deterrent to the Kremlin, he emphasized, is the American industrial machine, which must not be permitted to slump through apathy or dissension.

The meeting was attended by 385 persons, of whom 239 represented railroads and 105 represented industrial concerns. A. H. Nasher, station-merchandise service inspector, Pacific Electric, was elected chairman of the L.C.L. Subcommittee. The next meeting was scheduled for San Diego, Cal., on June 14-15.

L. V. Extends Truck Service To Western New York

"To increase car supply and expedite handling of l.c.l. freight" in western New York state, the Lehigh Valley will substitute trucks for train service at most stations between Buffalo and Niagara Falls on the west and Ithaca, Cortland and Auburn on the east.

Added to the service speed-up, the step was taken, according to Charles L. Patterson, vice-president and general manager, because of sharply increasing operating costs on local inter-station shipments. As a result, a large number of box cars, only partially loaded in most instances, will be utilized to better advantage, Mr. Patterson said.

The L.V. first experimented with truck-in-lieu-of-rail service at stations in Pennsylvania, later including those in New Jersey. Finding that the improved service met with its patrons' approval, decision was made to extend the operation to 50 stations on its main line and branches in Western New York, effective April 2. The railroad will continue to use its own billing and accounting procedures, but station-to-station trucking will be performed by motor carriers with whom contracts are made.

34 Receive Certificates At A.U. Rail Institute

The Fifth Rail Transportation Institute to be held at American University in Washington, D. C., concluded with a dinner meeting on March 22, at which certificates were awarded to 34 students. Dr. Paul F. Douglass, president of the university, was toastmaster at the final session and presented the certificates.

Eighteen railroad men were among the students in the institute—W. A. Faris, Bryant R. Goodall, C. L. Gravett, Jr., and J. Wayne Russell, of the Norfolk & Western; Frank F. Detzner, A. L. Johnson and Thomas E. Reynolds, New York Central; W. L. Cannady, R. L. Edmonson and Clyde A. McLeod, St. Louis-San Francisco; James A. Greener and Robert R. Hicks, Denver & Rio Grande Western; Vance W. Bigelow, Reading; Charles R. Cain, Aliquippa & Southern; Leonard B. Griffin, Texas & Pacific; Salvatore A. LaCavera, Washington Terminal Company; M. A. McIntyre, Southern Pacific, and R. C. Pierce, St. Johnsbury & LaMoille County.

Rogers' Opposition Calls Truck Regulation Lax

Federal regulation of the trucking industry is now so lax and ineffective as to warrant serious consideration of its discontinuance. During the past 15 years this regulation has been so futile that, had it not been in existence, conditions would probably be no different from what they now are.

These views were expressed March 28 by Frank Tobin, director of research of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers. He was testifying before the Senate Interstate and Foreign Commerce Committee, opposing the reappointment of Commissioner John L. Rogers to the Interstate Commerce Commission.

Motor carrier regulation today is at a "deplorably low ebb," Mr. Tobin declared. "We know John Rogers is primarily responsible for it. That is the only reason our organization opposes him." Mr. Tobin added that states already are moving in "to fill the vacuum created by ineffective federal regulation."

Mr. Tobin was the only witness to appear in opposition to Mr. Rogers at the March 28 hearing. However, he told the committee that "four to six" other opponents wished to appear later, and Senator Johnson, Democrat of Colorado, the committee chairman, agreed to hold further hearings on April 3 and April 5.

The committee had previously held its first session March 14, at which time Commissioner Rogers appeared, as did 16 others who testified in his behalf. (See *Railway Age* of March 19, page 73.) In announcing that still more hearings will be held, the sen-

The class of the American University's Fifth Rail Transportation Institute with Professor L. M. Homberger, the director (lower left)

INDIANA HARBOR BELT SIGNS WAGE CONTRACT

An agreement providing for a 27-cent-per-hour wage increase with subsequent cost-of-living adjustments, a three-year "moratorium" on further wage negotiations, and eventual adoption of the 40-hour work week has been signed by the Indiana Harbor Belt and the Brotherhood of Locomotive Firemen & Enginemen, according to an announcement made at Chicago on March 28. Twenty-three cents of the wage increase is retroactive to October 1, 1950; two cents to January 1, 1951, and the remaining two cents to March 1.

"The I. H. B. agreement," according to L. W. Horning, vice-president, personnel and public relations, of the parent New York Central, "is the same offer made by the Carriers' Conference Committee to the operating unions on a national basis. The agreement assures three years of peace. It also grants the 40-hour week, but because of the present manpower situation that feature of the agreement will be postponed for at least a year."

The agreement—reportedly actually signed on March 3—bore the signatures of R. H. McGraw, general manager of the I. H. B., and of C. J. Huber and L. L. Sandford, general chairman and vice-chairman, respectively, of the B. of L. F. & E. on the I. H. B. It affects about 280 firemen.

While the new agreement was under consideration by the firemen, committees representing I. H. B. enginemen and trainmen are said to have requested similar arrangements, and the railroad has submitted proposals accordingly, except that the one offered to the trainmen includes an air hose coupling clause.

ator read into the record a telegram from T. C. Davis, former board chairman of the Missouri Pacific. Mr. Davis requested an opportunity to present testimony in opposition to Mr. Rogers, and is expected to appear at the April 5 session.

Meanwhile, in his attack on the present state of motor carrier regulation, Mr. Tobin gave particular attention to so-called "gypsy" operators which, he said, are the "substantial workhorses" in the motor freight field today.

He said these "gypsies"—individual truck owners without certificates who "lease" their vehicles to authorized carriers — create a "lowest common denominator" for the trucking industry and offer "brutal competition" to all forms of transportation.

The so-called "leasing practices" that permit the "gypsy" operator to exist provide all sorts of opportunities to frustrate regulation, Mr. Tobin declared. He said the "selfish and irresponsible trucking interests" that specialize in using "gypsies" do not want real regulation. "They like the present regulation John Rogers stands for—a soft and easy regulation that does not cramp their style," Mr. Tobin said.

Also appearing at the March 28 session was J. Carter Fort, vice-president and general counsel of the Association of American Railroads. Appearing on behalf of himself, Mr. Fort said he supported Mr. Rogers' confirmation, adding that he felt that Mr. Rogers was well qualified for another term on the commission.

1950 Truck Volume 25 Per Cent Above 1949

The volume of freight handled by Class I intercity motor carriers in 1950 exceeded the 1949 volume by 25.3 per cent, according to figures compiled by American Trucking Association's Department of Research. The 1950 business set an "all-time record," the A.T.A. statement said.

The figures, which were "preliminary," reflected the operations of 1,358 intercity truckers, both common and contract carriers, with a total 1950 volume of 175.9 million tons, as compared with 140.4 million tons in 1949. The A.T.A. truck-loading index, based on 1941 as 100, was at 222 for 1950, as compared with 1949's 178. A separate fourth-quarter study showed that the index for 1950's last three months was 231, as compared with 181 for the last quarter of 1949.

Defense Department, A.A.R Will Teach Better Loading

The Association of American Railroads will cooperate with the Department of Defense's Military Traffic Service and the three branches of the armed forces in the conduct of six regional seminars at which "sound loading and bracing methods to prevent loss or damage to vital equipment and war materials will be stressed." This was announced March 28 by M.T.S. Director Kenneth L. Vore, who explained that the seminars would be attended by the armed force's civilian and military traffic specialists.

They will be three-day meetings, and the schedule is as follows: Oklahoma City, Okla., Tinker Air Force Base, April 4-6; Oakland, Cal., Naval Supply Center, April 10-12; Great Lakes, Ill., Naval Supply Depot, April 24-26; Atlanta, Ga., Fort McPherson, May 1-3; New York, Port of Embarkation, May 7-9; Washington, D.C., Bolling Air Force Base, May 10-12.

Personnel attending the courses "will be those directly responsible for the loading of military supplies or engaged in the training of such personnel," the M.T.S. announcement said. It added that "upon return to their stations, they will further instruct personnel engaged in movement of military freight."

The seminars were developed by the Loading Rules Committee of M.T.S. under the chairmanship of Francis X. Dunleavy, assistant deputy director of M.T.S. The subjects to be covered include: (1) loading of open-top cars; (2) loading of closed-type cars; (3) bracing methods; (4) empty projectile loading; (5) loading of ammunition and dangerous articles; (6) protection of machine tool shipments; (7) handling of specialized shipments.

Loomis Ends Wage Story; Escalator Clauses Working

Daniel P. Loomis, chairman of the Association of Western Railways, concluded on March 28 his testimony at hearings which the Senate committee on labor and public welfare is holding in connection with its investigation of the failure to settle wage and rules disputes between the railroads and those of their employees who are represented by the four train and engine service brotherhoods.

Mr. Loomis was management's spokesman at the hearings. In the wage proceedings, he is chairman of the western carriers conference committee, one of the three regional groups representing management.

At the March 28 session of the Senate committee's hearings, Mr. Loomis addressed himself first to statements made at the previous session of March 22 by W. P. Kennedy, president of the Brotherhood of Railroad Trainmen. Contradicting earlier testimony by Mr. Loomis, Mr. Kennedy had said that he advised Mr. Loomis in February that he was opposed to the naming of Dr. John R. Steelman, assistant to President Truman, as arbitrator of rules matters involved in proposals for settlement of the "op" disputes.

Mr. Loomis' March 28 statement had this to say: "I do not mean to impugn Mr. Kennedy's veracity in any respect. It simply comes down to a question of what one man thinks he said and what another man thinks he heard. But I shall have to repeat that at no time since last Thursday had Mr. Kennedy told me or said in my pres-

Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ended March 24 were announced by the Association of American Railroads on March 29 as follows:

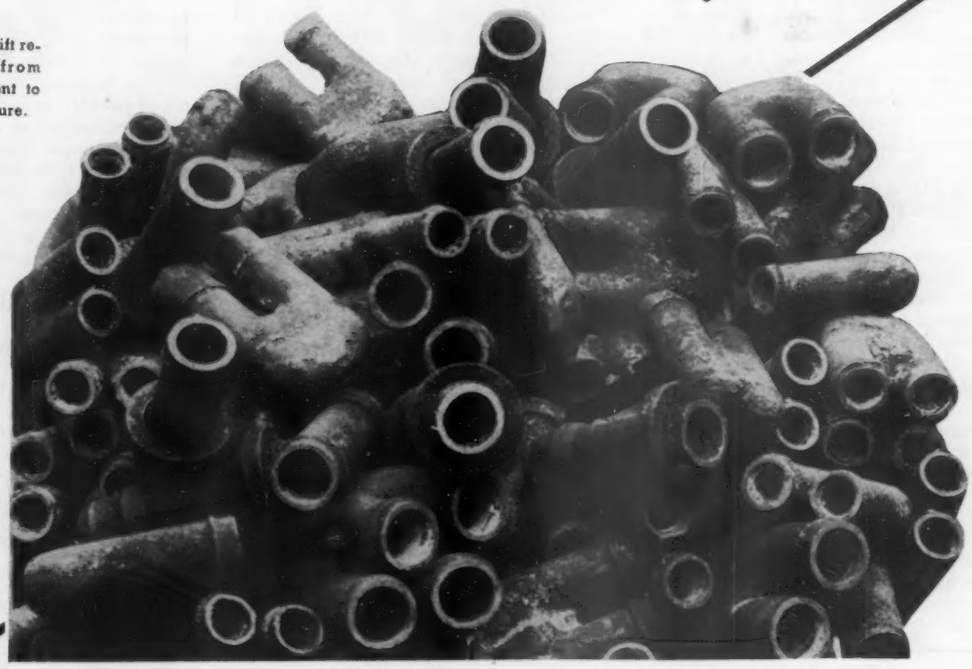
	Surplus	Shortage
Plain Box	0	22,507
Auto Box	6	186
Total Box	6	22,693
Gondola	117	3,494
Hopper	972	679
Covered Hopper	0	41
Stock	779	34
Flat	0	1,313
Refrigerator	1,101	598
Other	204	30
	3,179	28,882

Don't Restrict

Steam Passages of Superheater Units

...It is Expensive

Samples of makeshift repairs removed from units that were sent to us for re-manufacture.



Internal ridges caused by butt welding the return bends onto straight lengths of old and questionable superheater tubing...cause eddy currents of steam with a consequent increase of wall temperature and eventual early failure of the butt welded return bend. Such conditions also *increase pressure drop* with a decrease in cylinder horsepower.

THE
SUPERHEATER CO.
Division of
COMBUSTION ENGINEERING-SUPERHEATER, INC.
200 Madison Ave., NEW YORK 16
Bankers Building, CHICAGO 3
Montreal, Canada, THE SUPERHEATER COMPANY, Ltd.
Representing AMERICAN THROTTLE COMPANY, INC.

This type of makeshift repairs is poor engineering practice and is one that does not pay when train schedules and failures are considered. You can only control the continuity of the wall structure at the return bend sections of the invisible steam surfaces...by machine-die-forging. These surfaces are subjected to high degrees of superheated steam and high boiler pressures which vary from the firing-up period to maximum operating conditions. They spell quick failure to makeshift repairs.

When superheater units wear out, *play safe* and have them re-manufactured at our plant. Such a set of units are returned to you like new with s-m-o-o-t-h interiors and exteriors and many more years of carefree and profitable service life. This policy PAYS.

Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • Steam Generators • Oil Separators • American Throttles

ence that Dr. Steelman was not acceptable to him as the arbitrator."

At the same time, Mr. Loomis went on to say that the railroads were now "willing to leave the question of who shall be the arbitrator to the president of the United States and will accept anyone named by him."

Mr. Loomis also noted that, since the March 22 session of the hearing, the Bureau of Labor Statistics' consumers' price index for February 15 had been announced as 184.2. He pointed out that the "ops" would thus be entitled to an escalator-clause raise of 8 cents per hour in addition to basic-rate increases of 25 cents for yardmen and 10 cents for roadmen which were provided in the memorandum of agreement signed at the White House on December 21, 1950, only to be rejected by the general chairmen of the four brotherhoods.

"One fact should be pointed out," Mr. Loomis added. "These increases will exceed the 10 per cent permitted under existing stabilization regulations but if the memorandum of agreement of December 21, 1950, is in fact an agreement as stated by the carriers, no stabilization approval is necessary since the agreement was made prior to January 25, 1951."

In the latter connection, the escalator-clause of the agreement reached March 1 with the non-operating employees is now involved in the stabilization program. The escalator base there was 178, so the "non-ops" are entitled to a 6-cent raise, effective April 1, in addition to the 12½-cent increase in their basic hourly rates which became effective as of February 1.

The additional 6-cent raise would be in conflict with the present stabilization policy which provides generally that increases awarded in agreements entered after January 25, 1951, must not raise wages by more than 10 per cent above the January, 1950, base.

The railroads last week wrote to Eric Johnston, administrator of the Economic Stabilization Agency, asking his approval of the increase. As one railroad man put it, the carriers were trying to "find out where we stand and where we go." Meanwhile, however, it was stated at the Department of Defense's information office on March 28 that the Army, which is operating the railroads under President Truman seizure order of last August 25, had directed that the "benefits" of the March 21 agreement be paid to the "non-ops" in accordance with the agreement.

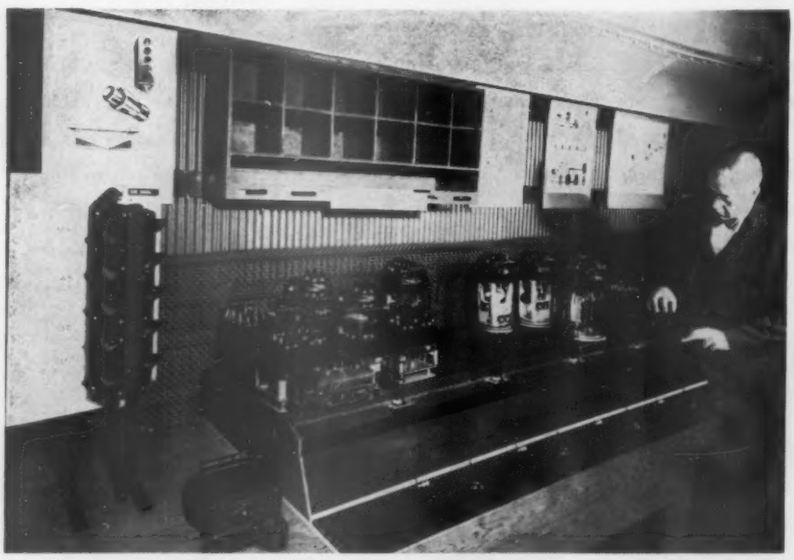
Private Autos in Cities Strangling Economic Life

Workers and shoppers driving into town in their private automobiles are strangling the economic life of the nation's largest business centers, G. M. Woods, transportation engineer of the Westinghouse Electric Corporation, said in a recent address before the Youngstown, Ohio, section of the American Society of Mechanical Engineers. Mr. Woods pointed out that huge expenditures by cities throughout the United States to improve highway facilities are not appreciably relieving traffic congestion in central areas. While the automobile forms a very essential part of modern living, he added, it has no place in the congested areas of cities.

Aside from traffic jams he is causing, the office worker who drives his car into the city rather than use public transportation is paying a yearly premium of $85 to $250 for the privilege of driving through congested streets, the Westinghouse engineer said. "According to the American Automobile Association, the average cost of driving a private automobile is 8¼ cents per mile—plus parking charges. If a man drives four miles in the round trip between home and place of employment, his driving cost in 33 cents per day plus a minimum parking charge of 25 cents."

Even persons who look only at the out-of-pocket expense of driving to work, estimated at about five cents a mile, could save from $52.50 to $152.50 annually, Mr. Woods continued. There are other costs involved when every one uses his own private transportation, he said. "As towns grow into cities, property values rise to the point where great areas cannot be devoted to storage of vehicles and it becomes more important to keep streets clear for more and more people to move freely."

Mr. Woods explained that a city street 60 ft. wide, with no parking, provides three traffic lanes in each direction. If it is used exclusively by automobiles, it has an hourly capacity of 2,115 vehicles, or 3,700 passengers, based on statistics that show the average car to have 1.75 passengers. If one lane in each direction were devoted to buses, the 180 buses involved would carry a total of 9,000 passengers. The



THE PENNSYLVANIA'S DEMONSTRATION, at Newark, N. J., and New York on March 21 and 22, of its new automatic speed control installation (see *Railway Age* of March 26, page 58, and March 12, page 93) included a working model, shown in the left-hand picture. The box car under the demonstrator's hand at the right represents a standing train, with the model signals indicating, in order from right to left," "stop and proceed not faster than 15 m.p.h., prepared to stop"; "approach" (30 m.p.h. speed limit); "approach medium" (45 m.p.h. speed limit); and "clear." In the smaller picture, George W. Baughman (left), assistant vice-president and chief engineer of the Union Switch & Signal Co., points out to Herman H. Pevler, vice-president of the Pennsylvania at New York, a detail of the speed control governor which is an important feature of the equipment being supplied to the railroad by U. S. & S.

more TRAIN RADIO COMMUNICATION than any other railroad in the world

Every diesel-powered train—passenger and freight—on the MISSOURI PACIFIC System will, by this summer, be equipped with train radio. Engineers on hundreds of trains will be in direct communication with each other.

Thus, MO-PAC, in its Centennial Year, again makes transportation history.

. . . So passengers and shippers who specify "MO-PAC", the Modern Progressive Railroad, can count on even faster, more dependable transportation.

MISSOURI PACIFIC LINES

1851 A CENTURY OF SERVICE 1951

SERVING THE WEST-SOUTHWEST EMPIRE

remaining two lanes of automobile traffic would carry 2,130 passengers, to which could be added the bus riders, increasing the street capacity from its original 3,700 passengers to 11,130.

Multiple-deck or express highways also are inadequate for today's city traffic problems, he concluded, citing the Holland tunnel under the Hudson river at New York. Careful studies, Mr. Woods said, have determined that maximum capacity of the tunnel is 1,500 vehicles per lane each hour, or onl 67 per cent more than the capacity of a single lane on a city street. Speed also has an effect on traffic capacity of highways. A theoretical capacity of 1,500 vehicles at 15 m.p.h. rises to a maximum capacity of 2,060 vehicles at 30 m.p.h., but drops sharply again at 50 m.p.h. if safe driving distance is maintained between vehicles.

I.C.C. Dismisses Latest Pleas In Gateway Case

The Interstate Commerce Commission has dismissed as "not relevant to the issues," a petition filed February 20 by the Union Pacific in the Ogden Gateway cae. The petition had asked that the record in the gateway case be reopened for the purpose of receiving in evidence a radio speech made January 27 by Senator Johnson, Democrat of Colorado.

The U.P. charged that Senator Johnson, who is chairman of the Senate Interstate and Foreign Commerce committee, was "attempting to influence" the I.C.C. (See *Railway Age* of February 26, page 46.) The Denver & Rio Grande Western had in turn accused the U.P. of trying "to embarrass and influence the commission."

The Ogden Gateway case, docketed as No. 30297, is the proceeding wherein the D. & R.G.W. is asking the commission to force open the Ogden, Utah, gateway by requiring the U.P. to participate in joint through rates via that gateway on certain traffic.

Accelerated Amortization For Diesels and Yards

The New York, Chicago & St. Louis and the Seaboard Air Line were among transportation agencies which recently received certificates of necessity authorizing accelerated amortization of facilities for tax purposes. The Nickel Plate certificate covered write-off of $4,889,548 spent for 45 diesel-electric locomotives, while $3,014,000 spent for yard facilities was involved in the S.A.L. authorization.

The certificates were issued by the Defense Production Administration upon recommendation of the Defense Transport Administration. The action was announced by D.T.A. in a March 27 statement which also noted that other like certificates have recently been issued as follows: Red Star Towing & Transport Co., New York, $650,000 for barge and tugboat construction; Marine Fuel Transfer Corporation, New York, $225,000 for tank barge construction; Rookwood Oil Terminals, Inc., $100,817 for barge construction.

The D.T.A. announcement also revealed that a direct government loan of $2,025,000 would be made to American Bus Lines "for expansion of passenger bus facilities." The loan would be made by the Reconstruction Finance Corporation, and American has applied to the Interstate Commerce Commission for approval of the transaction.

A previous D.T.A. statement had reviewed this accelerated amortization and loan situation as of March 19. Up to that time, the statement said, D.T.A. had received 643 accelerated-amortization applications involving $1,448,707,968, and 31 loan applications involving $27,985,994. These figures were contained in a report made to Administrator James K. Knudson by Colonel Robert R. Hendon, chief of D.T.A.'s Tax Amortization and Loans Unit.

The report noted that relatively few of the applications had been handled; and it attributed the lag to the volume of business, the number of applications having "far exceeded the estimate on which the tax amortization and loan office was set up." The unit's staff has now been increased, and it is "catching up with the workload," the report added.

Canadian International Freight Rates Increased

The Canadian Board of Transport Commissioners has authorized freight rate increases on some hauls between Canada and the United States and on other international traffic.

The increases—four per cent in the east and two per cent in the west—do not affect all-Canadian traffic, but are in line with increases awarded U. S. railways on March 12 by the Interstate Commerce Commission. The increase is one of several awarded since the war on those types of traffic by the Canadian board, which usually follows the U. S. lead on rates involving Canada-U. S. traffic.

In general, the new increases apply to the Canadian part of movements between the U. S. and Canada in both directions and on the Canadian section of hauls between two U. S. points. They apply, also, to export and import rates on goods passing through Canadian ports, but the board prescribed that existing differentials and parity conditions between ports are to be maintained.

The board said the railways may put the new rates into effect on 15 days' notice.

Allegheny Board Hears C. F. Hood

This country's transportation system faces an unprecedented strain, Clifford F. Hood, executive vice-president, operations, of the United States Steel Company, said in Pittsburgh, Pa., on March 22.

Speaking at the luncheon session of the 25th anniversary meeting of the Allegheny Regional Advisory Board, Mr. Hood listed several steps being taken by railroads to meet this condition: Careful examination of car requirements for future loads now being forecast; making cars do more work; improving the bad-order car situation; modernizing motive power; and improving road and yard facilities.

"I wish to urge continued study of the railroad car situation program," he added, "and that new cars be designed so as to provide a wide range of effectiveness. The story of the 65-ft. gondola car has been told over and over, yet I feel I must again emphasize that the 65-ft. car saves every day cars that would be necessary as idlers for multiple loads in short cars. Additionally, the 42-ft. and 46-ft. gondolas are not now long enough to carry many commodities and fabricated articles. As size of many manufactured items increases, stock lengths of steel and other commodities tend to increase. The result is lessened effectiveness of 42-ft. and 46-ft. cars and a greater need for 52-ft. cars . . . I do not wish to overlook the box cars. Increase in effectiveness is materially multiplied by the modern wide door. In my opinion the minimum car door width should be not less than 8 ft. and in fact in many cases the need is for 10 ft. Extra switching, greater time spent in loading and unloading, may often be minimized through availability of well-designed equipment. Turn around time is improved and this means more car days."

The following board officers were elected at the meeting: General chairman, W. W. Larkin, traffic manager, Continental Foundry & Machine Co.; vice-general chairman, J. N. Lind, assistant general traffic manager, National Supply Company; chairman, executive committee, P. W. Hartsock, assistant traffic manager, Warner Company; vice-chairman, executive committee, J. F. Davis, traffic manager, Babcock & Wilcox Tube Co.; and general secretary, G. W. Brundage, traffic manager, Bessemer Limestone & Cement Co.

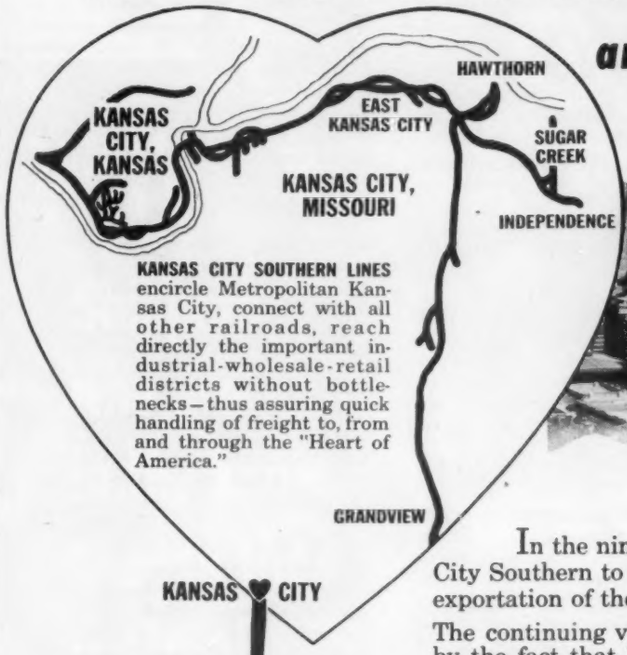
A. C. MacDonald Takes Canadian Defense Post

Allan C. MacDonald, executive assistant to the president of the Canadian Pacific at Montreal, Que., has been granted leave of absence to become director of shipbuilding in Canada's new Department of Defense Production.

Mr. MacDonald, who was born in Portage la Prairie, Man., on February 16, 1914, had been with the C.P. since he was 15. After serving for 11 years at Winnipeg, Man., and two at Vancouver, B.C., in various positions in the hotel, purchasing and operating departments, Mr. MacDonald was transferred to the east in 1942 as secretary to vice-president, subsequently becoming chief clerk. He was for a

We're PART of the HEART of AMERICA...

and We're Proud of it!



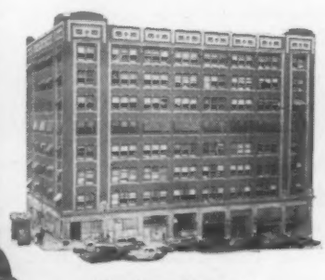
In the nineties, alert Kansas Citians built the Kansas City Southern to provide the shortest possible route for the exportation of the Midwest's fast-expanding production.

The continuing vigor of the "Heart of America" is indicated by the fact that Metropolitan Kansas City gained 17.7% in population (808,231) in the past decade—proportionately a greater growth than New York, Chicago, Philadelphia, Boston, Pittsburgh, St. Louis, Cleveland, Buffalo, Cincinnati or Milwaukee. In the same period, Kansas City's freight volume increased more than 40%.

Today Kansas City Southern Lines are the most direct rail route between Kansas City and five World Ports—and there are many other reasons why more and more tonnage is moving to and from the booming South-Southwest and Gulf areas via KCS Lines!

J. M. Scott

Vice President—Traffic



Headquarters of
Kansas City Southern Lines
Kansas City 6, Missouri

KANSAS CITY SOUTHERN *Lines*

FREIGHT HEADED SOUTH really rolls on KCS 77—out of Kansas City nightly at 8:40!

time assigned to special duties in connection with the transportation equipment committee of the Combined Production and Resources Board, following which he served as assistant to the general superintendent of the C.P.'s

Allan C. MacDonald

Quebec district. Appointed superintendent, Trenton division, at Toronto, Ont., in 1945, Mr. MacDonald was transferred to the Farnham division a year later. He was promoted to assistant to president at Montreal in 1947, and in 1948 became executive assistant to president.

Vore Succeeds Plowman As Defense Traffic Chief

Kenneth L. Vore has become director of the Department of Defense's Military Traffic Service, succeeding E. G. Plowman. A former director of transportation for the Los Angeles (Cal.) Chamber of Commerce, Mr. Vore has been associated with M.T.S. since last October, serving as consultant to Mr. Plowman.

Mr. Plowman, who has been on leave from his duties as vice-president (traffic), of the United States Steel Corporation, became the M. T. S. director when the service was created last August. He will continue to serve Secretary of Defense Marshall as a special consultant on military traffic matters.

U. S. Transport System Is World's Best—Gass

"We have the greatest wealth of the most efficient transportation in the world," Arthur H. Gass, chairman of the Car Service Division of the Association of American Railroads, said in Boston, Mass., on March 16 at a luncheon held as part of the 50th regular meeting of the New England Shippers Advisory Board.

"I am a railroader by training and profession," Mr. Gass added, "but I am not unaware that other methods of transportation also are doing business. I have full respect for their ability to do their jobs, including some they can do better than we can do them on the rails. But facts are facts, and it is a fact that when the chips are down we mean railroad when we talk about transportation, especially in connection with military emergency."

The railroads now own more freight cars and have more such cars in serviceable condition than at the time of Pearl Harbor, the A.A.R. official continued. Although railroads now own fewer locomotives than when this country was attacked by the Japanese, they have vastly more real hauling capacity. "The railroads also have greatly expanded the capacity and increased the efficiency of their roadway and terminal plant and facilities. They have installed since Pearl Harbor more than 10,000 miles of centralized traffic control . . . Grades and curves have been eased. Many new gravity-type yards have been installed and old yards enlarged. New shops have been constructed and older shops expanded and reequipped with modern high-speed tools.

"As we saw in World War II," Mr. Gass concluded, "railroad capacity is capable of rapid and extensive expansion in time of emergency . . . Experience has indoctrinated me with almost unbounded confidence in what can be accomplished through the skill and ingenuity of shippers and railroad men working together in a great cause. At the same time we must not forget the lions that may appear in our path. There needs to be recognition this time that the railroads are a war facility ranking right behind the combat forces, because their welfare is indispensable to the usefulness of all other facilities."

P.R.R. Diesel Program Now Over 90% Complete

The Pennsylvania's program of new and rehabilitated passenger and freight equipment includes 1,036 diesel locomotives, 450 new passenger cars and 26,600 new and 34,000 rehabilitated freight cars, Walter S. Franklin, president, said in the road's recently released annual report. In money, he added, the program now totals $534,000,000, of which equipment costing $331,877,000 had been delivered or rehabilitated at the end of 1950. The dieselization program, now more than 90 per cent complete—845 diesel engines were in service at the year-end—will mean that 83 per cent of the Pennsylvania's passenger train car-miles and 56 per cent of the freight gross ton-miles will be operated by diesel-electric or electric power, Mr. Franklin continued. Of the 450 new passenger cars in the program, 386 have been delivered, and of the 378 to be fully renovated, 192 have been completed.

Rates Don't Parallel Charges on Farm Products

The failure of average transportation charges on farm products to parallel the trend of freight rates is pointed up in an article in the current issue of "The Marketing and Transportation Situation," published by the Bureau of Agricultural Economics of the Department of Agriculture.

The article was written by Donald E. Church, transportation economist with the bureau. It said average charges for commodities arriving at terminal markets not only reflect increases in rates, but changes in volume from each source of supply, and reduced length of haul as buyers turn to nearer sources of supply.

"Most shippers send their products to more than one market, and all markets receive products from more than one supply point. Consequently, the average transportation charge to shippers differs from the freight rate, since it is the total freight bill for all movements from all origins divided by the total volume of product shipped," the article said.

The study by Mr. Church considered rail rates on oranges and potatoes moving to nine markets, and butter moving to six markets. It covered the period of 1941-1949.

For oranges, the average increase in freight rates over this period was 31 per cent, while average transportation charges increased 22.6 per cent. Rates on potatoes increased 46.5 per cent on an average for the nine markets, and transportation charges increased 65.1 per cent. Butter rates went up 55.4 per cent, while average charges increased 53.2 per cent.

P.R.R. Man Heads Solid Fuels Transport Section

Walter J. Howard, former chief of the open car section, Bureau of Service, Interstate Commerce Commission, has been appointed director of the transportation division of the Solid Fuels Administration. The latter organization is attached to the Department of Interior. Mr. Howard had been with the Pennsylvania since 1911, but was granted a furlough in late 1950 to aid in defense operations of the I.C.C.

Parlor Car Seat Tickets Offered in Books of Ten

Parlor car passengers of the Chicago, Milwaukee, St. Paul & Pacific who make frequent trips between Chicago and Milwaukee, Wis., may now avail themselves of 10-seat ticket books which may be used in connection with 10-ride first-class rail tickets to eliminate nine out of 10 stops at ticket offices.

The "10-seat" tickets are sold at regular fares—10 times the single trip rate being charged at time of purchase. Each coupon in the 2¼-in. by 4-in. book bears both a book number and a ticket, or ride, number. To secure a reservation the passenger merely gives the reservation bureau his book and ticket number and writes the assigned space onto the face of the ticket himself. He may then go directly to the train. When the passenger is unable to make an advance reservation, he may

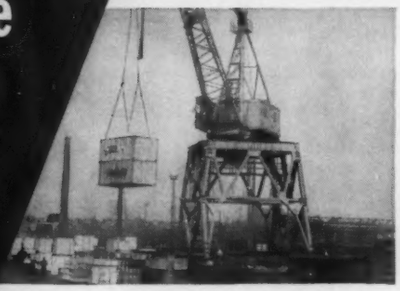
WHY Shippers who are in the know choose the route of Phoebe Snow

Gravity trestle for unloading bulk grain and cement into barges.

Float bridges from Hoboken to any dock in the New York area.

Palletized handling for packaged freight.

975 ft. double-track pier for unloading bulk ore.



2 electric Gantry Cranes handle any load up to 120 tons!

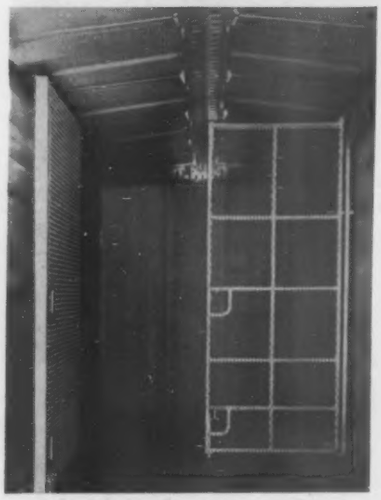
New icing trestle for speeding the refrigeration of perishables.

Coal handling facilities second to none.

Weather-tight air-activated containers for cement.

Whether it's packaged freight, heavy machinery, perishables or bulk traffic, modern Lackawanna efficiency adds up to preferred handling for your shipments. That's why so many of the world's great shippers specify Lackawanna—to or through New York.

Lackawanna Railroad



READY FOR MASS PRODUCTION is the new "Compartmentizer" of the Pullman-Standard Car Manufacturing Company, designed to prevent shifting of lading in railroad box cars. The device consists of pairs of steel gates pivoted from a trolley running from vertical members on each side of the car. In closed position, the gates are locked in holes in metal strips along the center line of the floor and ceiling, respectively, and, at the pivot edge, with two keeper strips along the side walls of the car. Thus quadruple locking is provided. The standard installation will consist of two pairs of gates, providing for three compartments, but additional gates can be used. Since the securing holes are spaced on three-inch centers, the size of compartments may be varied for each run in any dimensions in increments of this space. When not in use the gates may be stored against the end linings. (Left) "Compartmentizer" gates in open and locked positions, respectively (left above) vertical locking bar engaged in center strip along the floor; (right above) stud automatically engages keeper strip along the car wall when the gate is swung into closed position.

"write his own ticket" for any space that the conductor may have available at trainside.

It is believed that this is the first time such parlor car seat books have been available on a western road. For the time being, the arrangement is confined to travel between Chicago and Milwaukee. All parlor cars in service between those cities on the Milwaukee are railroad owned and operated.

Student Groups Offered Low Fares for Study Trips

As a special inducement for students to travel in groups to points of educational, scenic or historic interest along its lines, the Chicago, Milwaukee, St. Paul & Pacific has announced special student group fares for which as few as 15 persons traveling together may qualify. The reduction is intended to stimulate travel to centers where museums, art institutes, state and federal buildings or historic or educational institutions are located.

The actual amount of fare reduction will vary according to the size of the group. In announcing the reduction plan, the Milwaukee said its passenger and ticket agents were prepared to arrange for meals, lodging and sightseeing buses in accordance with individual needs of each group.

Gass Reports Car Supply Continues Upward Trend

Class I railroads in February again installed more freight cars than they retired, and it was the seventh consecutive month in which there was an increase in serviceable ownership.

This was revealed by Arthur H. Gass, chairman of the Car Service Division of the Association of American Railroads, in his latest issue of the "National Transportation Situation." Mr. Gass said the "belt-tightening processes" of the railroads have, since last July, added 39,500 serviceable cars to the available supply.

In February this increase amounted to 3,900 cars, representing a 1,500 gain in ownership and a 2,400 drop in bad orders. There were 5,498 new cars installed in February, while 3,968 were retired. Mr. Gass said the retirement rate is "already at a subnormal level."

The number of cars held for repairs on March 1 this year was down to 4.9 per cent of total ownership, Mr. Gass reported. The bad-order total on March 1 was 87,671 cars, as compared to 144,308 on March 1, 1950. Mr. Gass said the number of bad order cars is "approaching a practical minimum," and added that future gains in the serviceable car supply will have to come mainly from car-building shops.

Mr. Gass noted that the "new wave of freight car buying" which reached near-record figures in January continued into February. By March 1, the backlog of cars on order by Class I roads and their car-line affiliates totaled 141,982 cars. The American Railway Car Institute, which includes private car lines and smaller railroads in its total, placed the backlog at 154,861 cars.

Turning to his discussion of the car situation, the C.S.D. chairman said the slight decline in box car shortages since early in March "could represent a tendency towards a slight easing in the critical nationwide box car supply situation." For the week ended March 3 average daily shortages totaled 27,244 cars, a new all-time peak. Average daily shortages were 26,132 for the week ending March 17.

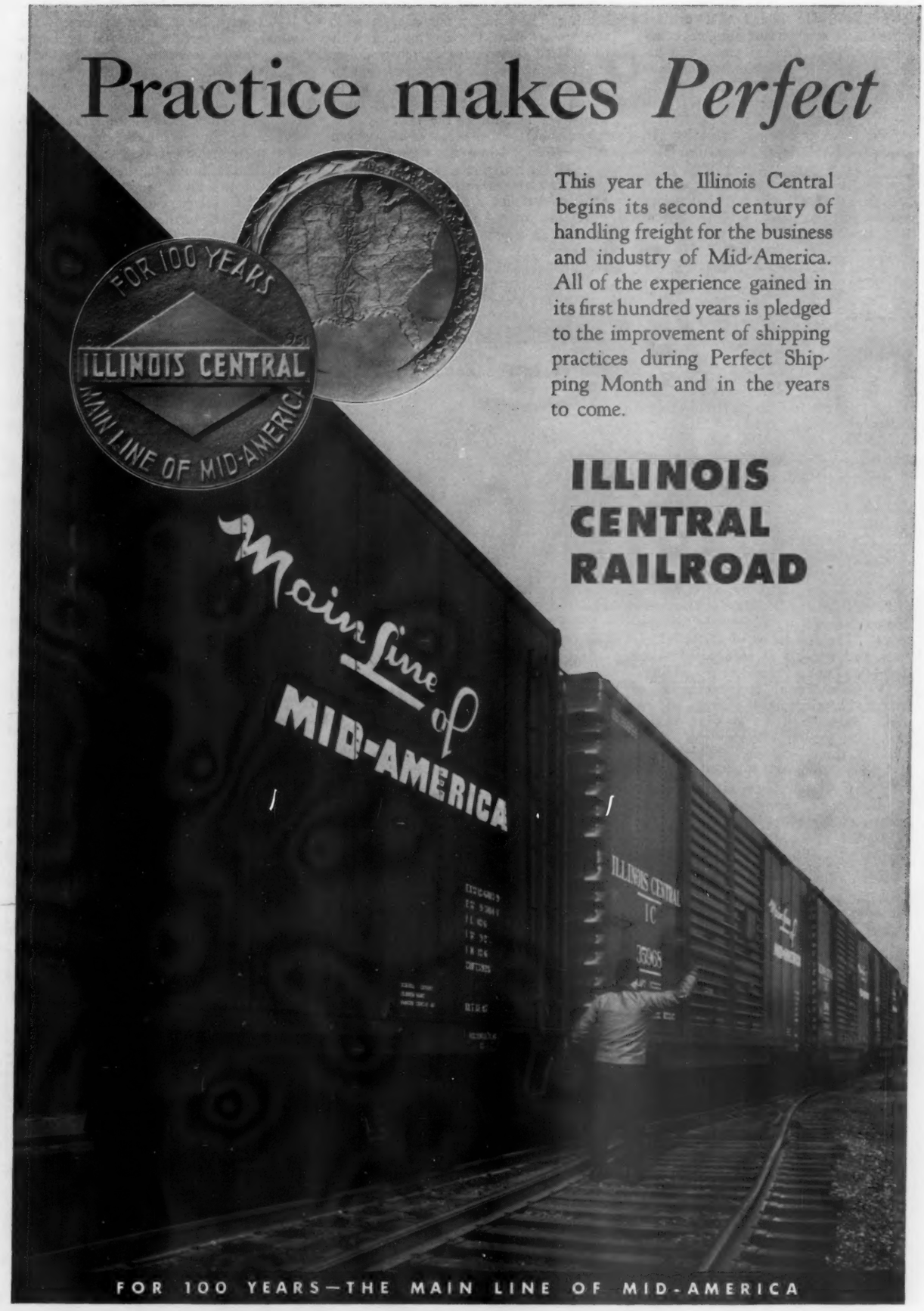
Westbound movement of empty box cars has shown a remarkable recovery since the switchmen returned to work, Mr. Gass continued. For the first 15 days of March, cars moving west averaged 1,097 daily, as compared to a daily average of 501 during February. Performance on C.S.D. quota orders and Interstate Commerce Commission service orders has been "generally excellent," Mr. Gass added.

Reduced coal loadings, reflecting the favorable stock position of industry, have eased somewhat the demand for hopper cars, but gondola demands remain "very heavy" throughout the country, Mr. Gass reported.

The gondola situation has been particularly bad at steel mills in Eastern-Allegheny territory, where a considerable amount of material is stored on the ground awaiting cars, Mr. Gass said. He said heavier demands for hoppers are also expected around April 1, since lake navigation will be opening about that time.

Commenting on the lake coal and ore programs for the coming season, Mr. Gass said the coal program contemplates movement of 53 to 55 million tons, as compared to about 51.5 million tons last season. The ore program for 1951 has been tentatively set at 90 million tons. It is also hoped, Mr. Gass added, that two or three million tons can be moved by all-rail routes during the summer and fall months.

As to other types of freight cars, the C.S.D. chairman said there has been "considerable improvement" recently in easing the shortage of flat cars in


Practice makes *Perfect*
This year the Illinois Central begins its second century of handling freight for the business and industry of Mid-America. All of the experience gained in its first hundred years is pledged to the improvement of shipping practices during Perfect Shipping Month and in the years to come.
FOR 100 YEARS
1951
ILLINOIS CENTRAL
MAIN LINE OF MID-AMERICA
ILLINOIS CENTRAL RAILROAD
Main Line of MID-AMERICA
ILLINOIS CENTRAL
IC
FOR 100 YEARS—THE MAIN LINE OF MID-AMERICA

the midwest. He added that critical shortages of refrigerator cars, especially in the North Central areas, are beginning to clear up although loadings continue heavy and shortages are still being reported from several sections.

Average turn-around time of freight cars in February, as reported by Mr. Gass, was 17.61 days. The comparable figure for February 1950 was 19.98 days. On the basis of reports from 764 cities in all 13 shipper board districts, cars detained beyond the free time of 48 hours averaged 16.66 per cent of those placed in February. This compared with 15.95 per cent for January, and 20.5 per cent in February 1950.

U. S. Chamber Will Vote On Truck "Barrier" Policy

The membership of the Chamber of Commerce of the United States will be asked to vote on a proposed policy statement declaring that "the states should be encouraged to cooperate in the elimination of unnecessary size and weight restrictions" on motor vehicles handling interstate traffic. The balloting will be at the chamber's annual meeting which will be held in Washington, D. C., beginning April 30.

The proposed declaration has been approved by the chamber's policy committee and reviewed by its board of directors. In addition to the statement quoted above, it would include this sentence: "The regulation of motor vehicle sizes and weights is recognized to be a state and not a federal responsibility."

The chamber's announcement of March 21 said that the proposal was made "because of the growing need to assure maximum effective use of the nation's transportation industry in the defense emergency." It also referred to Defense Transport Administrator James K. Knudson's recent appeal to state governors for cooperation in bringing about the elimination of "unjustifiable highway transport barriers." (See *Railway Age* of March 19, page 71.)

I.C.C. Scans Youth Awards And Rail Publicity Travel

Under the title "Unauthorized Free Transportation by Railroads," the Interstate Commerce Commission has launched an inquiry (Docket No. 30475) into (a) the granting of educational awards by railroads to winners of state-conducted rural youth achievement contests; and (b) railroad public relations activities wherein members of the press, radio or motion picture industry travel on tickets purchased by public relations firms which, in turn, are under contract to the railroad.

The opening hearing—conducted in Chicago on March 22—was confined almost entirely to developing the nature and extent of such practices on western roads. Commissioner R. F. Mitchell prefaced the hearing by saying that it was not the intention of the commission to prosecute any road as the result of findings uncovered by the hearing. The primary purpose, he said, was to acquaint the commission with what the railroads are currently doing and thereby permit the commission to render more uniform definition as to which practices are acceptable, and which are not, under the law.

Evidence from the files of 10 western roads was read into the record by two of the commission's special agents. With few exceptions, all cases cited concerned either '4-H' Club and Future Farmers of America achievement awards or promotional travel in connection with new passenger services, freight facilities, etc.

Representatives of both rural youth movements were present at the hearing. It was customary, they explained, for winners of certain state-wide achievement contests to be furnished with funds adequate to permit their attendance at the club's national conventions. As a part of their agricultural development work and their "responsibilities to the communities they serve." the railroads, they said, have for years contributed funds to the regional officers of the clubs, some of which go toward travel expenses of contest winners. It was further pointed out, however, that winners were not obligated to travel on any particular railroad and examples were cited where the winners did not use rail transportation for any portion of their trip to the convention;

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways

(Switching and Terminal Companies Not Included)

Income Items	United States For the month of December 1950	1949	For the twelve months of 1950	1949
1. Net railway operating income	$113,297,938	$68,770,306	$1,039,813,927	$686,481,895
2. Other income	59,483,307	61,063,672	265,682,339	254,494,184
3. Total income	172,781,245	129,833,978	1,305,496,266	940,976,080
4. Miscellaneous deductions from income	5,482,921	6,741,882	47,638,228	40,297,130
5. Income available for fixed charges	167,298,324	123,092,096	1,257,858,038	900,678,950
6. Fixed charges:				
6–01. Rent for leased roads and equipment	9,602,506	9,004,965	123,216,829	120,122,021
6–02. Interest deductions[1]	25,775,661	25,538,668	301,415,231	298,438,915
6–03. Other deductions	578,371	563,966	3,055,551	2,868,870
6–04. Total fixed charges	35,956,538	35,107,599	427,687,611	421,429,806
7. Income after fixed charges	131,341,786	87,984,497	830,170,427	479,249,144
8. Other deductions	11,282,150	6,069,468	46,793,357	41,214,587
9. Net income	120,059,636	81,915,029	783,377,070	438,034,557
10. Depreciation (Way and structures and Equipment)	36,965,360	34,683,574	429,669,982	407,815,162
11. Amortization of defense projects	2,797,564	1,465,519	17,541,062	16,514,092
12. Federal income taxes	104,418,311	13,009,129	601,196,255	261,561,411
13. Dividend appropriations:				
13–01. On common stock	22,556,246	18,236,152	232,907,039	188,049,252
13–02. On preferred stock	7,434,837	9,009,743	79,119,703	64,302,583
Ratio of income to fixed charges (Item 5 ÷ 6–04)	4.65	3.51	2.94	2.14

Selected Expenditure and Asset Items	United States Balance at end of December 1950	1949
17. Expenditures (gross) for additions and betterments—Road	$286,442,503	$321,768,092
18. Expenditures (gross) for additions and betterments—Equipment	779,399,092	983,906,724
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	463,237,355	478,918,800
20. Other unadjusted debits	96,120,978	99,680,310
21. Cash	955,497,603	825,713,578
22. Temporary cash investments	974,931,796	756,890,167
23. Special deposits	119,260,628	100,001,586
24. Loans and bills receivable	898,730	1,229,444
25. Traffic and car-service balances—Dr.	51,654,282	50,901,393
26. Net balance receivable from agents and conductors	175,042,435	130,632,214
27. Miscellaneous accounts receivable	481,753,093	288,471,700
28. Materials and supplies	725,819,348	725,351,514
29. Interest and dividends receivable	13,518,926	15,923,212
30. Accrued accounts receivable	223,468,375	150,349,682
31. Other current assets	36,811,789	32,235,003
32. Total current assets (items 21 to 31)	3,758,657,005	3,077,699,493
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$149,265,430	$184,243,586
41. Loans and bills payable[3]	1,638,500	10,116,360
42. Traffic and car-service balances—Cr.	117,948,893	88,125,106
43. Audited accounts and wages payable	516,725,236	428,753,394
44. Miscellaneous accounts payable	230,995,411	204,278,640
45. Interest matured unpaid	53,382,163	55,874,352
46. Dividends matured unpaid	30,171,749	15,818,156
47. Unmatured interest accrued	72,281,027	71,961,037
48. Unmatured dividends declared	16,992,178	22,201,291
49. Accrued accounts payable	201,464,369	166,407,577
50. Taxes accrued	892,512,741	560,282,987
51. Other current liabilities	92,581,679	70,920,022
52. Total current liabilities (items 41 to 51)	2,226,693,946	1,694,738,922
53. Analysis of taxes accrued:		
53–01. U. S. Government taxes	742,832,899	424,851,860
53–02. Other than U. S. Government taxes	149,679,842	135,431,127
54. Other unadjusted credits	260,592,273	259,069,592

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.
Subject to revision.

PROGRESS ALL THE WAY

Over-night service

All the important improvements made by the Monon during the past five years have been made with but one thought in mind—to render a service-with-a-plus. The fleet of new, Diesel-powered locomotives —the hundreds of new freight cars of all types (more are still on order)—the miles of new ballast, ties and track—the higher and wider clearances—have been added to enable the Monon to *"carry things" for you, faster, safer and more dependably.*

Your next shipment may be a crate or it may be a carload. Let the Monon carry it for you. *Monon's fast, dependable freight schedules provide over-night service between all points on its lines.* See for yourself why more and more shippers are specifying Monon . . . why many of them have become regular customers and *boosters.*

Let us prove that Monon service is based upon the policy of continually improved service to merit your preference. The Monon has 22 on-line and off-line offices serving the nation. The one in your city will be happy to serve you.

MONON

THE HOOSIER LINE

CHICAGO, INDIANAPOLIS AND LOUISVILLE RAILWAY COMPANY

it was emphasized, too, that the railroad contributions were made not to the winners themselves, but to the state officers of the clubs and that in some cases the funds were used by the clubs for other purposes entirely.

Publicity Travel

The question of handling publicity travel was the other major point of interest to the commission. Its special agents cited examples of practices ranging from transportation of photographers and models to make railroad publicity films, to cases where tour promoters received free transportation in return for full-time promotional work on retainer bases. In almost every case the key question seemed to be whether or not the inclusion of the cost of rail tickets in the bill of the retained publicity firm to the railroad would constitute a case of "unauthorized free transportation."

The Missouri Pacific—though not a direct party to the hearing—raised the question about free transportation of railroad hospital association employees and staff members of railway-operated hospitals. As the road's General Attorney T. R. Ware put it: "There has never been a ruling on this matter, but if we are doing wrong by giving these people free transportation, we want to know."

Because the issues involved vary from road to road, in the interest of expediting the hearing, this question will not be included. Commissioner Mitchell indicated, however, that the commission would give consideration to holding separate hearings on the question at a later date.

In response to a specific question by a railroad attorney, Mr. Mitchell said the commission had no intention of making a similar inquiry into the practices of bus, truck or waterway transportation companies.

An eastern hearing under Docket No. 30475 will be held at a later date.

February Employment

Railroad employment decreased 0.06 per cent—from 1,253,379 to 1,252,619—from mid-January to mid-February, but the mid-February total was 11.3 per cent above that of February 1950, according to the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

The index of employment, based on the 1935-1939 average as 100, was 125.8 for February compared with 127.7 for the previous month and 113 for February, 1950.

February employment was below that of the previous month in three of the seven groups, and up in the other four. None of these changes amounted to as much as one per cent.

As compared with February 1950, employment increased in all groups. Increases ranged from 16.38 per cent for the maintenance of way and structures group to 1.33 per cent for the group embracing executives, officials and staff assistants. Maintenance of equipment and stores and train and engine service groups were up 15.05 per cent and 14.44 per cent, respectively.

Freight Car Loadings

Loadings of revenue freight in the week ended March 24 totaled 748,804 cars, the Association of American Railroads announced on March 29. This was an increase of 3,439 cars, or 0.5 per cent, compared with the previous week; an increase of 31,545 cars, or 4.4 per cent, compared with the corresponding week last year; and an increase of 152,475 cars, or 25.6 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended March 17 totaled 745,365 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, March 17

District	1951	1950	1949
Eastern	136,775	136,181	114,502
Allegheny	161,056	148,340	124,096
Pocahontas	59,733	68,233	20,012
Southern	130,452	128,962	111,005
Northwestern	76,854	75,258	76,188
Central Western	119,872	110,810	105,534
Southwestern	60,623	57,750	56,585
Total Western Districts	257,349	243,818	238,307
Total All Roads	745,365	725,534	607,922
Commodities:			
Grain and grain products	50,574	42,292	47,093
Livestock	7,158	7,811	8,597
Coal	131,694	191,234	45,850
Coke	16,031	12,365	12,252
Forest products	44,778	37,844	36,271
Ore	19,554	11,910	13,158
Merchandise l.c.l.	85,247	84,846	94,754
Miscellaneous	390,329	337,232	349,947
March 17	745,365	725,534	607,922
March 10	749,627	707,911	709,326
March 3	785,867	574,449	705,552
February 24	734,794	546,707	688,128
February 17	740,557	560,068	697,335
Cumulative total 11 weeks	7,989,967	6,686,342	7,634,359

In Canada.—Carloadings for the week ended March 17 totaled 77,250 cars, compared with 74,882 cars for the previous week, and 74,382 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
March 17, 1951	77,250	39,316
March 18, 1950	74,382	33,086
Cumulative totals for Canada:		
March 17, 1951	815,742	398,081
March 18, 1950	745,896	314,308

A TICKET TO RETIREMENT valid from "Hard Work to Happy Leisure" was presented to Alistair Fraser, retired vice-president of traffic of the Canadian National, at a recent luncheon given in his honor at Detroit, Mich. Bearing the names of his 178 passenger and freight associates on the Grand Trunk Western, the ticket was presented to Mr. Fraser in a portfolio which also contained a $1,000 Canadian National bond. Shown with Mr. Fraser (third from left) are: A. M. Nolan, general western passenger agent, Chicago; Geo. L. Bryson, passenger traffic manager, (U.S. lines); Mr. Fraser; Ralph G. Evans, general agent, passenger department, Detroit; J. V. Maloney, newly appointed assistant vice-president of freight traffic of the C.N.'s U.S., lines and J. L. Bickley, general passenger agent, Chicago. Mr. Fraser's retirement on March 15 was reported in *Railway Age* of March 19

Rentzel Named Commerce Secretary for Transport

Delos W. Rentzel, chairman of the Civil Aeronautics Board, has been appointed Under Secretary of Commerce for Transportation to succeed Major General Philip B. Fleming, who in turn has been named Ambassador to Costa Rica. Their nominations were forwarded to the Senate by President Truman on March 19.

At the same time, the President nominated Donald W. Nyrop, present administrator of the Civil Aeronautics Administration, to replace Mr. Rentzel as a member of C.A.B. Charles Horne, who has been acting director of the Office of Federal Airways in C.A.A., was nominated to succeed Mr. Nyrop as C.A.A. administrator.

Mr. Rentzel will be the second Under Secretary for Transportation since that position was created last year. (See *Railway Age* of March 18, 1950, page 79.) General Fleming was the first appointee and took office July 24, moving up from chairmanship of the former Maritime Commission.

Mr. Nyrop's appointment to the

A MILESTONE IN AMERICAN HISTORY

1851 100th ANNIVERSARY 1951
Great Lakes to the Sea
Erie Railroad

Bath for a Big Baby

"Housekeeping" on a railroad, keeping cars and locomotives clean, has developed ingenious machines like the one you see here to do the job better and faster.

Here is one of Erie's big diesels getting its regular bath. Chemically-treated water sprays out of dozens of jets under high pressure. Huge circular brushes whirling at high speed remove the grime that accumulates so fast on a busy railroad. Out moves the diesel—all 200 feet of it—spick and span in gleaming black and yellow in less than three minutes, ready for its next run!

You may not think cleaning a diesel important, but it is typical of how Erie attacks every problem in its constant search of finding ways to run a better railroad.

It all adds up to progressive railroading—the continuous effort to improve the safe, dependable transportation of passengers and freight. It is this spirit which has earned the Erie the reputation as a leader among railroads—ready to serve our country well, in peacetime or in war!

Erie Railroad
Mark of PROGRESS in Railroading

ERIE

C.A.B. is for the remainder of a 6-year term expiring December 31, 1953. It is the second recent appointment to the board, the other having been that of Chan Gurney, former senator from South Dakota, who took office there on March 12.

The Senate Interstate and Foreign Commerce Committee will hold hearings April 4 on the nominations of Mr. Rentzel, Mr. Nyrop and Mr. Horne.

I.C.C. Approves Long Island Train-Control Plan

Train-control and signal installations proposed by the Long Island to increase safety of operation on its lines have been approved by the Interstate Commerce Commission. The road's proposals resulted from recommendations made by the commission in the report on its investigation of the rear-end collision between two commuter trains at Kew Gardens, N. Y., on November 22, 1950 (see *Railway Age* of December 23, 1950, page 31.)

The commission's approval order, dated March 22, authorizes installation of a train-control system on the North Side branch, which extends from signal tower "Harold" in Long Island City, N. Y., to Port Washington; and on the Jamaica-Babylon section of the Montauk branch. The former is a 16.2-mile. line, all double track except the 4.2 mi. of single track between Great Neck and Port Washington. The Jamaica-Babylon line is 27.6 mi. long, all double track.

As the road's application described it, the train-control system will be of the two-speed type, providing for a maximum authorized speed of 55 m.p.h., and a restricted speed of 12 m.p.h. The latter will be automatically and continuously enforced for trains entering and proceeding through a block occupied by a preceding or opposing train.

The commission-approved plans also contemplate installation of an automatic block signal system, in lieu of the present manual-block system, on the single track between Great Neck and Port Washington.

Bills in Congress

Several additional bills of interest to railroads have been introduced in Congress since the latest previous listing in *Railway Age* of March 12, page 99. Those bills and their sponsors are:

Introduced in Senate

S. 1064, to restrict influence of carriers in plans for alteration or modification of securities of other carriers (O'Conor of Maryland).

S. 1137, to provide for separation of subsidy from air-mail pay (McClellan of Arkansas for himself and 15 other senators).

S. 1139, to make "certain changes in laws applicable to regulatory agencies of the government so as to effectuate recommendations of the (Hoover) Commission on Organization of the Executive Branch of the Government" (McClellan, for himself and 13 other senators).

S. 1141, to "expand activities of the Department of Commerce in accordance with recommendations of the (Hoover) Commission on Organization of the Executive Branch of the Government" (O'Conor, for himself and 14 other senators).

Introduced in House

H.R. 2957, to increase capital stock of the Inland Waterways Corporation and extend the service of such corporation to the Tennessee and Cumberland rivers (Jones of Alabama).

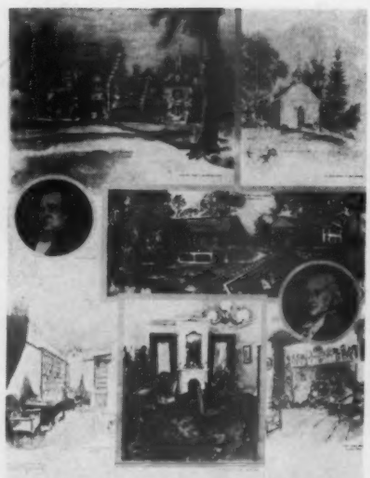
H.R. 3050, to amend the Railroad Retirement Act to provide full annuities for individuals who have completed 30 years of service or have attained the age of 60, equal to one-half the average monthly compensation computed on the basis of the five highest years of earnings (Battle of Alabama).

H.R. 3120, to provide a system of transcontinental superhighways (Staggers of West Virginia).

H.R. 3121, to amend the Railroad Retirement Act to permit retirement at age 62 and to provide for payments of $95 per month to widows regardless of age (Perkins of Kentucky).

H.R. 3248, to amend the Railroad Retirement Act to provide for a 20 per cent increase in annuities, pensions, and certain lump sums payable under such act (Priest of Tennessee).

H.R. 3249, to amend the Railroad Retirement Act to provide for a 20 per cent increase in the survivor annuities and insurance lump sum payable under such act (Priest).



HISTORIC "SLEEPY HOLLOW LAND" in the Hudson River valley is dramatized in this full-color poster issued by the New York Central System. The poster shows Sunnyside, home of Washington Irving; Philipse Castle, restored Dutch trading post of 1683; and Old Dutch Church, made famous by Irving in the "Legend of Sleepy Hollow." Copies of the poster may be obtained free by teachers, schools, librarians and societies by writing direct to the railroad, room 1334, 466 Lexington avenue, New York 17

H.R. 3320, to provide for separation of subsidy from air-mail pay (Dingell of Michigan).

H.R. 3367, to provide for a 25 per cent increase in annuities and pensions payable to railroad employees and to their survivors (Rees of Kansas).

H.R. 3413, to provide that the tax on transportation of persons shall not apply in the case of a member of the armed forces traveling for the purpose of visiting his home (Andresen of Minnesota).

January Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for January, as compared with January 1950. The compilation, which is subject to revision, follows:

Item	Month of January 1951	1950
Number of train accidents*	1,028	762
Number of accidents resulting in casualties	62	35
Number of casualties in train, train-service and nontrain accidents:		
Trespassers:		
Killed	56	68
Injured	55	61
Passengers on trains:		
(a) In train accidents*		
Killed	..	..
Injured	4	39
(b) In train-service accidents		
Killed	..	1
Injured	125	216
Travelers not on trains:		
Killed	..	1
Injured	68	77
Employees on duty:		
Killed	32	27
Injured	2,178	1,655
All other nontrespassers**		
Killed	165	144
Injured	693	497
Total—All classes of persons:		
Killed	253	241
Injured	3,123	2,545

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $275 or more to railway property in 1950. Beginning January 1, 1951, this minimum was raised to $300. Only a minor part of the total accidents result in casualties to persons, as noted above.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:		
Killed	155	134
Injured	508	368

ORGANIZATIONS

To celebrate its silver anniversary, the **Cleveland, Ohio, Chapter** of the **Railway Business Women's Association** will hold a dinner and dance at the Hotel Cleveland on April 7 and a luncheon at the Tudor Arms Hotel on April 8. Association President Mrs. Genevieve Sonnie, of the New York Central, says membership in the association has grown to the point where there are now chapters at Buffalo, N. Y., Chicago, Cincinnati, Ohio, Detroit, Mich., Indianapolis, Ind., Kansas City, Mo., and St. Louis, Philadelphia, Pa., Minneapolis, Minn., and St. Paul, New Orleans, La., New York and Washington, D. C.

The **Clearing-Cicero Traffic Conference** will hold its annual industrial

FAIR TREATMENT

Experience has shown that industry goes where it is wanted and stays where it is treated fairly.

That is one big reason why the Seaboard Southeast is growing so rapidly. The people of this area really want new industries and will work to help them succeed.

Let us help you find the right place for your plant. We have assisted many of the nation's outstanding concerns in their plant location problems and we will gladly render you a similar service without cost or obligation. All inquiries will be held in strict confidence.

Write, wire or telephone:
Warren T. White, Assistant Vice President
Seaboard Air Line Railroad
Norfolk 10, Va.

GROW with the GROWING SOUTHEAST!

SEABOARD AIR LINE RAILROAD

THROUGH THE HEART OF THE SOUTH

night on April 12. A family-style chicken dinner will be served at 6:30 p.m., following which the group will hear a talk by Dale E. Sutton of the Illinois Commerce Commission.

The **Transportation Association of America** has announced election of Edgar W. Smith, president of the Portland, Ore., Chamber of Commerce, as a member of its board of directors and as general chairman of the newly-created Pacific Northwest Forum, which comprises Oregon, Washington, northern Idaho and western Montana; of Frank E. McCaslin, president of the Oregon Portland Cement Company, as chairman of the Oregon division of the Pacific Northwest Gorum; of Kenneth M. Kennell, vice-president of Shaffer Terminals, Inc., Tacoma, Wash., as chairman of the Washington division, and of Harlan I. Peyton, president of the Peyton Investment Company, Spokane, Wash., as chairman of the Inland Empire division of the forum.

The **Western Railway Club,** Chicago, will commemorate the centennials of the Chicago, Milwaukee, St. Paul & Pacific and the Illinois Central at its meeting on April 16, at 8 p.m. at the Sherman Hotel. Senator Styles Bridges, of New Hampshire, will be the principal speaker. There will be a reception at 6 p.m. and dinner at 7.

The **Railroad General Agents Association** of Los Angeles, Cal., has elected the following officers for 1951-52: President, L. E. Gabrielson, general agent, Chicago, Burlington & Quincy system; first vice-president, C. F. Hallsman, general agent, passenger department, Union Pacific; second vice-president, A. E. Beach, general agent, Roscoe, Snyder & Pacific; third vice-president, H. N. Knocke, assistant general freight agent, Great Northern; secretary-treasurer, Douglas Seaman, district passenger agent, Pennsylvania.

The **Traffic Club of Brooklyn, N. Y.,** will hold its next meeting on April 5, at the Hotel Granada. It will be designated as "Railroad Night," with a guest speaker and entertainment.

The **Los Angeles, Cal., Chamber of Commerce** has appointed Gerald W. Collins as director of its transportation division.

The **Transportation Club** of the **Rochester, N. Y., Chamber of Commerce** will give a testimonial dinner in honor of Frederick W. Burton, retired director of the transportation department of the chamber, at the Rochester Club, at 7 p.m. on April 12.

The **Women's Traffic Club of San Francisco** has installed the following officers for 1951-52: President, Helen W. Routh, California Packing Corporation; vice-president, Phyllys Nelson, Bethlehem Pacific Coast Steel Company; secretary, Florence Cunningham, Overland Freight Transfer Company, and treasurer, Jewell Sloat, Business Properties, Inc.

E. W. Tinker, executive secretary, American Paper & Pulp Assn., New York, will be guest speaker at the special luncheon to be sponsored by the **Atlantic States Shippers Advisory Board** in the Claridge Hotel, Atlantic City, N. J., on April 27 in connection with its 84th regular meeting. Mr. Tinker's address will be entitled "The Growth of the Paper Industry."

SUPPLY TRADE

The **Southern Wood Preserving Company** has appointed **L. P. Wilburn** and **J. Harry Dunstan** as vice-presidents.

H. Raymond Benson, formerly New England district maintenance supervisor of the **Westinghouse Electric Corporation,** has been appointed manager of the transportation department, at district headquarters in Boston, Mass. Mr. Benson, an electrical engineering graduate of Northeastern

H. Raymond Benson

University, joined the transportation sales department of Westinghouse in the New England district in 1924. He was appointed district maintenance supervisor in 1939. The company also has appointed **Wallace B. Strathdee** as manager of the marine and industrial departments at the New England district office.

C. K. Luyster has been appointed district sales manager for the **Woodings-Verona Tool Works** and the **Woodings Forge & Tool Co.,** with offices in the Railway Exchange building, St. Louis, Mo. Mr. Luyster was educated in the public schools of Brookfield, Mo., and at Missouri Wesleyan College. He was employed in the track and engineering departments of the Chicago, Burlington & Quincy from 1926 to 1940. From 1940 to 1945 he was engaged in consulting work with Day & Zimmerman, and since 1945 has been a representative for the Woodings tool companies.

Ellis W. Test, assistant to president of the **Pullman-Standard Car Manufacturing Company,** has retired after 43 years with that company. **Harris Shane,** director of personnel for the U. S. Department of Labor, has been appointed associate director of industrial relations.

Herbert E. McCandless, vice-president in charge of circulation for the **Simmons-Boardman Publishing Corporation,** has retired. Mr. McCandless was born in New York City on January 18, 1890. He began his business career there in 1905 in the banking field, and from 1911 to 1917 was associated with a New York

Herbert E. McCandless

public utility company. He served in the United States Army from late 1917 to 1919.

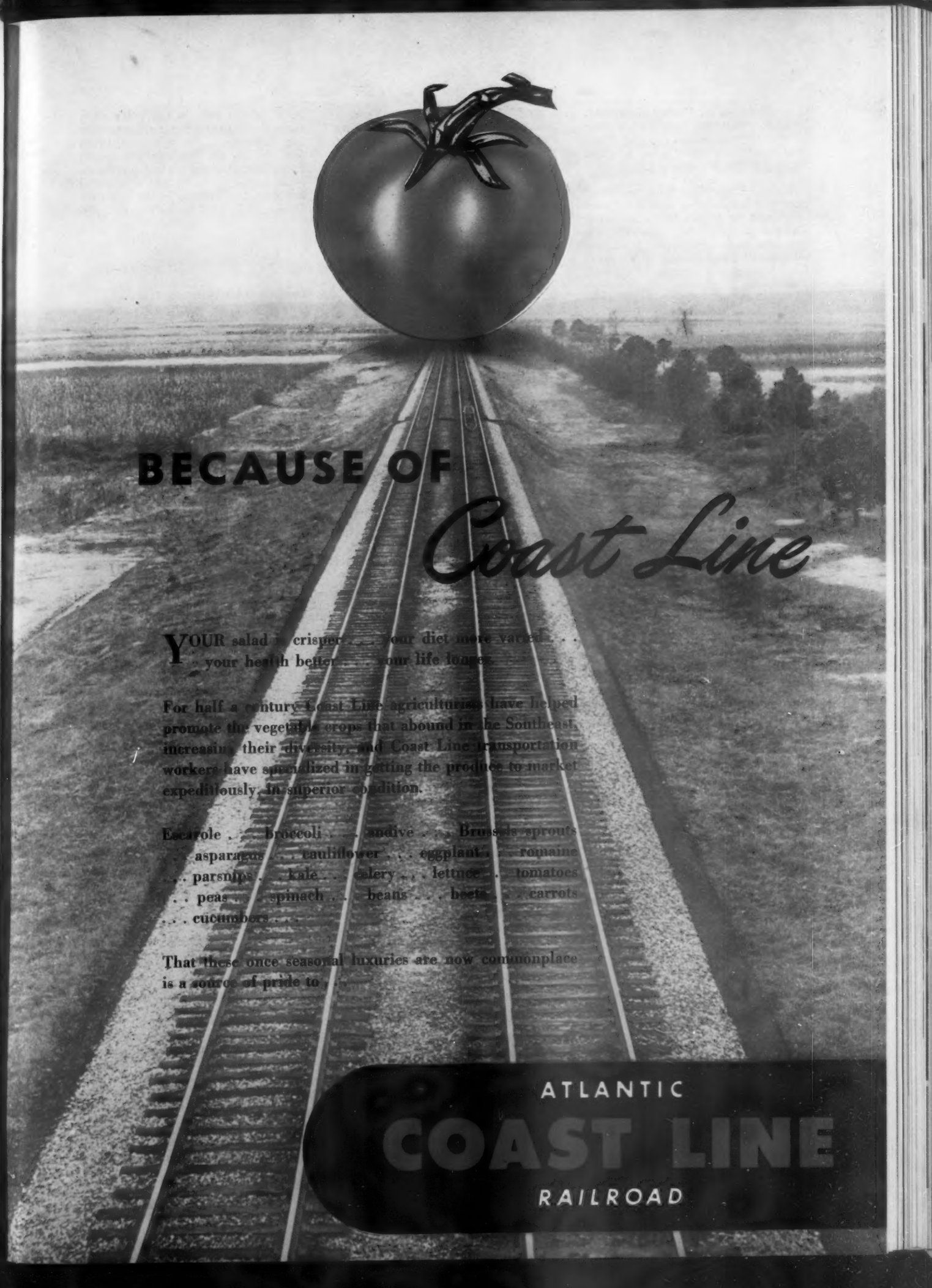
Mr. McCandless joined Simmons-Boardman in 1920 and in 1928 was appointed assistant to the president in charge of circulation. He was elected a vice-president in August, 1943.

J. G. Crost has been appointed executive vice-president of the **Sunroc Refrigeration Company,** Glen Riddle, Pa., for which company he has been acting in a consulting capacity.

Jay B. Tracy, Sr., has been appointed manager of railroad sales and service of the **General Refractories Company.** Mr. Tracy, formerly in the railroad sales and service department, has been with the company since 1925.

The **Baldwin-Lima-Hamilton Corporation** has closed its offices at 120 Broadway, New York. All sales activities in the New York area will be coordinated in the company's offices at 60 E. 42nd street, New York.

J. R. Lewis has been appointed assistant general sales manager of the **Quaker Rubber Corporation,** a di-


BECAUSE OF
Coast Line
YOUR salad . . . crisper . . . your diet more varied . . . your health better . . . your life longer.
For half a century Coast Line agriculturists have helped promote the vegetable crops that abound in the Southeast, increasing their diversity, and Coast Line transportation workers have specialized in getting the produce to market expeditiously, in superior condition.
Escarole . . . broccoli . . . endive . . . Brussels sprouts . . . asparagus . . . cauliflower . . . eggplant . . . romaine . . . parsnips . . . kale . . . celery . . . lettuce . . . tomatoes . . . peas . . . spinach . . . beans . . . beets . . . carrots . . . cucumbers . . .
That these once seasonal luxuries are now commonplace is a source of pride to . . .
ATLANTIC
COAST LINE
RAILROAD

vision of the **H. K. Porter Company.** Mr. Lewis has been with Quaker since 1940, working successively as Philadelphia, Pa., district sales manager and assistant sales manager.

R. B. Little has been appointed general sales manager of the Reliance division of the **Eaton Manufacturing Company.** Mr. Little attended the Republic Steel sales school, Massillon, Ohio, in 1932 and subsequently worked for five years as a member of the sales

R. B. Little

department in the New York office. In 1939 he joined the Moltrup Steel Products Company, Beaver Falls, Pa., as sales manager in charge of the New York district territory. He worked in that capacity until he joined Eaton as a sales representative in the Reliance division's New York sales office.

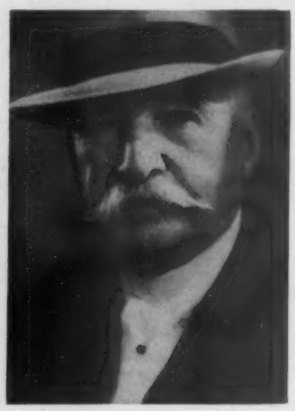
Headquarters of the coal chemical sales division of the **United States Steel Company** have been transferred from 25 Broad street, New York, to 525 William Penn Place building, Pittsburgh, Pa. A district sales office will be maintained temporarily at the present New York location under direction of **Walter Haggard,** but will move July 1 to 71 Broadway.

Charles A. Marshall has been elected president and treasurer of **Newhall-Marshall-Wood, Inc.,** in conjunction with the resignations of **David Newhall** as president and **John S. Wood** as vice-president and secretary-treasurer. Mr. Marshall has acquired the stock of his former associates in the corporation, but no immediate changes in operation or corporate name are planned.

OBITUARY

John W. Foyle, who for many years served as first vice-president of the Gustin-Bacon Manufacturing Company, Kansas City, Mo., died at St. Mary's Hospital in that city on February 27.

David C. Ball, organizer and chairman of the board of directors of Oakite Products, Inc., died on March 23 at his home in Lake Placid, N. Y. He was 93 years old. Mr. Ball organized the Oakley Chemical Company in 1909 and later became its president. In 1926 the



David C. Ball

name of the company was changed to Oakite Products, Inc. Mr. Ball became chairman of the board of directors in 1949.

Paul Traeger, formerly manager of the service department of the Simmons-Boardman Publishing Corporation, died on March 26, after an extended illness. Mr. Traeger was born in Germany on January 4, 1891. He received his early education in New York public schools and was graduated from Cornell University in 1913 with a degree in mechanical engineering. During summer vacations of 1911 and 1912, Mr. Traeger worked with the New York Central on third rail construction. From 1913 to 1915 he served as a special apprentice at the Harmon, N. Y., shops and, in the latter year, entered the road's electrical engineering department. He left in 1916 to join the Aetna Explosive Company, Emporium, Pa., and worked successively as master mechanic and mechanical engineer. Mr. Traeger joined Simmons-Boardman in 1918 working as advertis-

Paul Traeger

ing copy writer until 1927, when he was appointed assistant manager, service department. He was appointed manager of the department in 1931, which position he held until October 10, 1949, when he received a leave of absence because of ill health.

John J. Egan, Jr., has been appointed regional manager of the new Cleveland, Ohio, office of the Lamson Corporation. Mr. Egan formerly was with Dodge & Seymour in New York as sales supervisor. The new office, at 5013 Detroit avenue, will be headquarters for the area formerly covered by the Cleveland, Pittsburgh, Pa., and Cincinnati, Ohio, offices

CAR SERVICE

I.C.C. Service Order No. 872, which maintains a permit system in connection with the movement of grain to terminal elevators, has been modified by Amendment No. 2, which set back the expiration date from March 22 until June 15.

EQUIPMENT AND SUPPLIES

Domestic Equipment Orders Reported in March

Domestic orders for 526 diesel-electric locomotive units, 11,931 freight-train cars and 64 passenger cars were reported in *Railway Age* in March. Estimated cost of the locomotive units is $85,000,000; of the freight-train cars, $71,500,000; and of the passenger cars, $9,600,000. An accompanying table lists the orders in detail.

During the first three months of 1951, *Railway Age* has reported domestic orders for 39,230 freight-train cars costing an estimated $220,920,000; 771 diesel-electric locomotive units and six

THEY STOOD UP AND CHEERED when the first train crossed this new Southern Railway bridge last year. For it marked the completion of another important service-improvement project on the Southern." In the past ten years we've put about $125 million into dieselization alone. A like amount went into new freight and passenger cars and into plant improvements and betterments of all kinds. This great program is designed to give better service to civilian traffic and to provide adequate and accelerated service for national defense. • **SOUTHERN RAILWAY SYSTEM**

Locomotives

Purchaser	No.	Type	Issue Reported	Builder
A. & B. B.	1	1,200-hp. Switching	Mar. 5	Baldwin-Lima-Hamilton
Calumet & Hecla Consolidated Copper Co.	1	1,200-hp. Switching	Mar. 5	Baldwin-Lima-Hamilton
K. C. S.	4	1,200-hp. Switching	Mar. 12	Baldwin-Lima-Hamilton
	4	2,250-hp. "A" Pass.	Mar. 19	Electro-Motive
L. & N.	10	1,500-hp. Road	Mar. 12	Electro-Motive
	31	1,500-hp. Freight	Mar. 12	Electro-Motive
	12	1,500-hp. "A" Frt.	Mar. 12	Electro-Motive
	4	1,500-hp. Gen. Purpose	Mar. 12	Electro-Motive
	10	1,200-hp. Switching	Mar. 12	Electro-Motive
N. Y. C.	22	2,250-hp. "A" Pass.	Mar. 19	Electro-Motive
	131	1,500-hp. "A" Frt.	Mar. 19	Electro-Motive
	7	1,500-hp. "B" Frt.	Mar. 19	Electro-Motive
	27	1,500-hp. Rd.-Sw.	Mar. 19	Electro-Motive
	11	1,200-hp. Switching	Mar. 19	Electro-Motive
	6	800-hp. Switching	Mar. 19	Electro-Motive
	62	1,600-hp. "A" Frt.	Mar. 19	American-G. E.
	32	1,600-hp. "B" Frt.	Mar. 19	American-G. E.
	27	1,600-hp. Rd.-Sw.	Mar. 19	American-G. E.
	13	600-hp. Switching	Mar. 19	American-G. E.
	8	2,400-hp. "A" Pass.	Mar. 19	Fairbanks, Morse
	8	1,600-hp. "A" Frt.	Mar. 19	Fairbanks, Morse
	4	1,600-hp. "B" Frt.	Mar. 19	Fairbanks, Morse
	18	1,600-hp. "A" Frt.	Mar. 19	Baldwin-Lima-Hamilton
	8	1,600-hp. "B" Frt.	Mar. 19	Baldwin-Lima-Hamilton
	3	1,200-hp. Switching	Mar. 19	Baldwin-Lima-Hamilton
Sharon Steel Corp.	8	800-hp. Switching	Mar. 5	Baldwin-Lima-Hamilton
T. & P.	7	3-unit 4,500-hp. Frt.	Mar. 26	Electro-Motive
	4	2-unit 3,000-hp. Frt.	Mar. 26	Electro-Motive
	1	1,500-hp. Freight	Mar. 26	Electro-Motive
	3	2-unit 4,500-hp. Pass.	Mar. 26	Electro-Motive
	2	2,250-hp. Passenger	Mar. 26	Electro-Motive
	6	1,500-hp. Rd.-Sw.	Mar. 26	Electro-Motive
	8	1,200-hp. Switching	Mar. 26	Electro-Motive
Wabash	2	1,200-hp. Switching	Mar. 5	Baldwin-Lima-Hamilton

Freight Cars

Amer. Refrig. Transit	500	40-ton Refrigerator	Mar. 19	Pressed Steel Car
A. T. & S. F.	250	70-ton Ballast	Mar. 26	Amer. Car & Fdy.
A. C. L.	6	50-ton Air Dump	Mar. 19	Magor Car
Bangor & Aroostook	500*	40-ton Refrigerator	Mar. 26	Pacific Car & Fdy.
C. of N. J.	500	50-ton Box	Mar. 19	Amer. Car & Fdy.
C. & O.	200	70-ton Cov. Hopper	Mar. 5	Pullman-Standard
C. & E. I.	500	70-ton Hopper	Mar. 26	Pressed Steel Car
	500	50-ton Hopper	Mar. 26	Pressed Steel Car
Cudahy Packing	50	40-ton Refrigerator	Mar. 19	Co. Shops
D. L. & W.	?	40-ton Hopper	Mar. 26	Amer. Car & Fdy.
Erie	500	70-ton Gondola	Mar. 12	Greenville Steel Car
	500	50-ton Box	Mar. 12	R. R. Shops
G. T. W.	250	50-ton Box	Mar. 26	Amer. Car & Fdy.
	250	70-ton Hopper	Mar. 26	Amer. Car & Fdy.
G. N.	1,000	70-ton Ore	Mar. 26	Amer. Car & Fdy.
I. T.	25	70-ton Gondola	Mar. 12	Greenville Steel Car
K. C. S.	500	70-ton Hopper	Mar. 19	Pullman-Standard
L. S. & I.	300	70-ton Ore	Mar. 19	Bethlehem Steel
	100	50-ton Box	Mar. 19	Pullman-Standard
L. & N.	100	70-ton Cov. Hopper	Mar. 19	Pullman-Standard
Mather Stock Car	50	40-ton Refrigerator	Mar. 19	Co. Shops
M. N. & S.	100	50-ton Box	Mar. 19	Pullman-Standard
M. P.	100	50-ton Pulpwood	Mar. 26	R. R. Shops
N. Y. C.	1,000	70-ton Gondola	Mar. 19	Greenville Steel Car
	500	70-ton Flat	Mar. 19	General American
	1,000**	70-ton Gondola	Mar. 19	Bethlehem Steel
N. P.	1,000	50-ton Box	Mar. 19	R. R. Shops
	200	70-ton Ore	Mar. 19	R. R. Shops
	50	Caboose	Mar. 19	R. R. Shops
P. R. R.	250	70-ton Cov. Hopper	Mar. 19	R. R. Shops
S. P.	500	70-ton Ballast	Mar. 26	Amer. Car & Fdy.
	100	70-ton Gondola	Mar. 26	Greenville Steel Car
T. & P.	250	70-ton Gondola	Mar. 26	R. R. Shops
Virginian	300	50-ton Box	Mar. 19	Pullman-Standard

*Originally ordered from the road's own shops.
**For the Pittsburgh & Lake Erie.

Passenger Cars

P. R. R.	64	Various	Mar. 26	Budd

steam locomotives costing an estimated $122,872,000; and 69 passenger cars costing an estimated $10,350,000. (The 500 refrigerator cars reported last month as ordered by the Bangor & Aroostook were originally ordered from the road's own shops—see *Railway Age* of January 22, page 42—hence they are not included again in the totals for March.)

FREIGHT CARS

The **Baltimore & Ohio** is inquiring for 1,000 70-ton gondola cars, 1,000 50-ton box cars and 500 70-ton covered hopper cars.

The **Grand Trunk Western** has ordered 300 70-ton high-side gondola cars and 250 50-ft. 50-ton box cars from the General American Transportation Corporation.

SIGNALING

The **Atchison, Topeka & Santa Fe** has ordered from the Union Switch & Signal Co. material to install centralized traffic control on approximately 18 miles of double track between Trinidad, Colo., and Lynn, N. M. The 7½-ft. style-C control machine will be installed at Las Vegas, N. M. In addition to code equipment, the order includes style H-5, searchlight signals, M-23A electric switch machines, T-21 switch stands, SL-21A electric switch locks, relays, rectifiers, transformers, etc. Field installation will be handled by railroad forces.

The **Atchison, Topeka & Santa Fe** has ordered from the Union Switch & Signal Co. material to install centralized traffic control on 107.5 miles of single track between Bakersfield, Cal., and Calwa. The 17½-ft. style C control machine will be installed at Fresno, Cal. In addition to code and carrier equipment, the order includes style H-5 searchlight signals, M-23A dual-control electric switch machines, T-21 switch stands, SL-21A electric switch locks, relays, rectifiers, coded track circuit apparatus, transformers, switch circuit controllers and housings. Field installation will be handled by railroad forces.

The **Chicago Great Western** has ordered from the Union Switch & Signal Co. materials to install a remotely-controlled interlocking at South St. Paul, Minn., including a B-30 control machine, signals, switch machines, relays, rectifiers, transformers and housings.

IRON & STEEL

The **Central of Pennsylvania** has ordered 1,200 gross tons of rail from the Bethlehem Steel Company.

CONSTRUCTION

Atlantic Coast Line.—Projects have been authorized by this road, at indicated probable costs, as follows: Realine main track between Satilla, Ga., and Haywood ($115,839); extend drainage culverts between Contentnea, S. C., and Selma ($104,542); reconstruct bridges over the Tar river at Tarboro, N. C. ($100,000), and at Greenville, N. C. ($48,000), and over Contentnea creek at Grifton, N. C. ($83,000); yard floodlighting systems at Waycross, Ga. ($25,678), and at Lakeland, Fla. ($22,901); interchange track with the Norfolk Southern at Wilson, N. C. ($24,000); and extension of passing track at Cope, S. C. ($22,198). Contracts have been awarded to the General Electric Company for the Waycross floodlighting system and to the Ellard Construction Company for grading on the track realinement between Satilla and Haywood.

Central of New Jersey.—This road has awarded two contracts for portions of work involved in new l.c.l. facilities at Eilzabeth, N. J.: To Charles F. Vachris, Inc., Brooklyn, N. Y., for platforms ($125,000), and to the DelBalso Construction Corporation,

THE SHIPPER'S RAILROAD WITH

a will to please and the ways of doing so

Shippers like a *friendly* railroad—one willing to solve special problems, offer suggestions, follow through efficiently. We of the Baltimore & Ohio not only offer this willingness, but also *support* it with practical working features like these:

SENTINEL SERVICE. A B&O "first" that provides siding-to-siding dependability on carload freight. Through its *Automatic Records* feature, shippers and receivers are advised of both schedule interruptions and reforwardings.

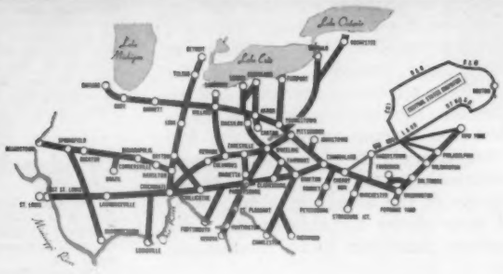
TIME-SAVER SERVICE. A streamline LCL service that offers dependable schedules, and saves ⅓ or more shipping time.

PROPER-HANDLING PROGRAM. An educational activity in freight claim prevention through careful handling of shipments over the road, in the terminals and at freight houses.

It pays to route via B&O. *Ask our man!*

Baltimore & Ohio
RAILROAD

Constantly *doing things*— better!



New York, for furnishing a steel roof for the platforms ($71,575).

Reading.—This road has awarded a contract to the General Railway Signal Company for a car retarder system in the eastbound classification yard at Rutherford, Pa., to cost an estimated $550,000. The J. C. Shawfield Company, Harrisburg, Pa., has received a contract for general excavation and grading in the yard, to cost an estimated $425,000. A contract also has been awarded to the Delta Construction Company, Hopewell, N. J., for bridge and grade crossing reconstruction at Grantham, Pa. Estimated cost of this project is $35,000.

Richmond, Fredericksburg & Potomac.—This road has authorized, at the indicated probable costs, track construction and remote control signaling at Possum Point, Va. ($24,500), and track construction at Fredericksburg, Va. ($92,500), and Milford ($71,500).

ABANDONMENTS

Chicago North Shore & Milwaukee.—On the grounds that the Illinois Commerce Commission's recent order prohibiting discontinuance of its suburban "Shore Line Route" places an "undue burden upon interstate commerce and confiscates petitioner's property and assets without due process of law," the C.N.S&M. has filed a petition for reconsideration of the commission's order. (See *Railway Age*, March 12, page 99.) In the petition, the North Shore cited nearly one hundred reasons why the commission should rescind its order and grant rehearings. The disputed order denied the road its request to abandon rail operations on the suburban branch line and to substitute operation of buses of a subsidiary company between Chicago and Waukegan, Ill.

Texas & New Orleans.—The I.C.C. has affirmed the decision of its Division 4 which authorized this road to abandon its Lampasas branch, 22.6 miles of main track and 1.7 miles of sidetrack, between Burnet, Tex., and Lampasas. (See *Railway Age* of June 10, 1950, page 82.) The commission imposed a condition that any person or persons should have 40 days from March 12 in which to purchase the line at not less than net salvage value. A dissenting opinion filed by Chairman Splawn said methods used by the T.&N.O. in allocating revenues and expenses to the branch "do not fairly reflect the revenue value of the line to the system." He also said adequate consideration was not given to the importance of the line in making shorter and more direct through routes. Commissioner Aitchison joined in this dissent.

Application has been filed with the I.C.C. by:

LOUISVILLE & NASHVILLE.—To abandon 12.7 miles of branch line from Paris, Ky., to Chicle.

Division 4 of the I.C.C. has **authorized:**

MIDDLE CREEK.—To abandon its entire line, approximately 4 miles, which extends from Hartland, W. Va., to Bickmore. The report by Division 4 said the coal resources that furnished the road's principal traffic have become exhausted.

TENNESSEE & NORTH CAROLINA.—To abandon its entire line, 24.8 miles, from Andrews, N. C., to Hayesville. Division 4 noted that the road has been operated at a loss for the past five years, and concluded that future traffic would not be sufficient to pay the cost of handling it.

FINANCIAL

Alleghany Corporation.—*Annual Report.*—This company's net income last year, excluding profit and loss on security transactions, was $1,244,407, compared with $1,869,557 in 1949, according to the recently released annual report. Security transactions, excluding loss of $4,899,366 on sale of 55,200 Missouri Pacific common shares purchased in 1929, produced a net gain of $2,175,997, compared with a net loss of $5,583,015 in 1949. Cost of the M.P. shares was $4,921,110, they were sold for $43,407. Decrease in net income, Robert R. Young, chairman, and Allan P. Kirby, president, said in the report, was due chiefly to reduction in assets caused by Alleghany's program of reacquiring shares of its two classes of preferred stock and to reduction in dividend income from the Chesapeake & Ohio and the Pittston Company. Security transactions during the first three months of 1950 included sale of 100,000 C. & O. common shares, 5,000 M.P. common shares and 4,317 New York, Chicago & St. Louis preferred shares, the report indicated.

Canadian Pacific.—*New Director.*—Harold M. Turner, president of the Canadian General Electric Company, has been elected to this road's board of directors.

New Securities

Application has been filed with the I.C.C. by:

ATLANTIC & EAST CAROLINA.—To issue a collateral trust note for $112,500 to finance acquisition at that price of a 1,000-hp. diesel-electric road-switching locomotive from the American Locomotive-General Electric Companies. The financing plan would involve a conditional sales agreement between the applicant and Alco, and an assignment arrangement between the latter and the Durham Life Insurance Company of Raleigh, N. C. The note would be issued to Durham. It would be a 4 per cent note, payable in monthly installments of $937.50 each from May 1, 1951, to April 1, 1961, inclusive.

Dividends Declared

Atchison, Topeka & Santa Fe.—$2, payable June 1 to holders of record April 27.

Carolina, Clinchfield & Ohio.—common, $1.25, quarterly, payable April 20 to holders of record April 10.

Chicago Great Western.—5% preferred (accumulation), 75¢, payable March 31 to holders of record March 27.

Lake Superior & Ishpeming.—common, 25¢, quarterly, payable April 14 to holders of record April 4.

Maine Central.—6% prior preferred, $1.50, quarterly, payable April 2 to holders of record March 24.

Norfolk & Western.—4% adj. preferred, 25¢, quarterly, payable May 10 to holders of record April 11.

Philadelphia & Trenton.—$2.50, quarterly, payable April 10 to holders of record March 30.

Providence & Worcester.—$2.50, quarterly, payable March 30 to holders of record March 23.

Reading.—50¢, quarterly, payable May 10 to holders of record April 12.

Vermont & Massachusetts.—$3, semiannual, payable April 7 to holders of record March 29.

Wheeling & Lake Erie.—common, $1.43¾, quarterly; 4% prior lien preferred, $1, quarterly, both payable May 1 to holders of record April 21.

Security Price Averages

	Mar. 27	Last Week	Last Year
Average price of 20 representative railway stocks	54.70	55.45	42.21
Average price of 20 representative railway bonds	96.80	97.70	93.31

RAILWAY OFFICERS

EXECUTIVE

As announced in the March 12 *Railway Age*, **T. E. Fox** has been appointed assistant to the chief executive officer of the Missouri Pacific Lines, with headquarters at St. Louis, Mo. Born in that city on May 23, 1907, Mr. Fox has spent his entire railroad career with the M. P. He started with that road in 1926, and has held various positions in the engineering, transportation, operating and executive departments. In April 1949 he was appointed assistant to the general superintendent of transportation, later being transferred from that post to the assistant superintendency at Nevada, Mo., in which capacity he served until his new appointment. He was on leave from the M. P. during World War II to serve overseas with the 761st Railway Transportation Company, holding the rank of captain.

T. E. Fox

As reported in the *Railway Age* of March 5, **Alvin D. Dugan,** assistant

Look what's ahead-Southwest

Diesels... Diesels and more Diesels to give you better, faster, smoother freight and passenger service.

1951 will see us *really* on the run . . . on the run with Diesel power on all major freight and passenger trains.

Yes sir, we're "re-doing" Katy service . . . blending the MODERN and the TRADITIONAL . . . the modern, heavy duty smooth hauling efficiency of new, giant road Diesels with the traditionally reliable Katy service the Southwest has known right down the line, for almost 80 years.

And, that's not all. There'll be more Diesel yard switchers working to shave minutes from terminal transferring times. There'll be many equipment and service improvements to speed your receiving dates . . . simplify your shipping schedules.

The Katy is quickening the pace. Stepping up the action for a vigorous Southwest of an alerted nation. In 1951 we continue expanding our service to you . . . This is our answer to your transportation problem.

Your local Katy representative will be glad to tell you even more about Katy's many new plans . . . and how you may benefit by shipping Katy, Southwest.

M·K·T
KATY RAILROAD
MISSOURI-KANSAS-TEXAS

THE **KATY** RAILROAD

NATURAL ROUTE SOUTHWEST

Perfect Shipping... Gets Top Priority...

...on New York Central's SMOOTH Water Level Route!

SMOOTH HANDLING! Some 14,500 members of New York Central freight house and freight yard crews are today graduates of special movie-illustrated courses in perfect shipping.

SMOOTH RIDING! Since 1945, New York Central has invested a total of more than $276,000,000 in new freight cars... and another $197,000,000 in smooth new Diesel-electric locomotives.

SMOOTH ROUTE! New York Central's tracks follow gentle, low-level valleys between East and Midwest. And since 1945, Central has put more than $150,000,000 into right-of-way improvements.

NEW YORK CENTRAL

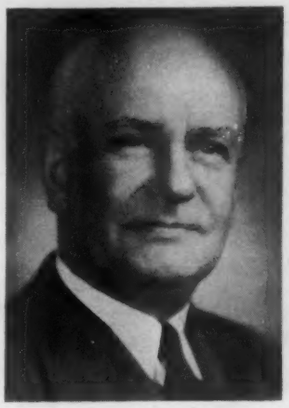
The Smooth Water Level Route

NEW YORK CENTRAL SYSTEM

vice-president, operations and maintenance, of the NEW YORK CENTRAL SYSTEM, at New York, has retired. Mr. Dugan was born in 1883 at Springfield, Ohio, and entered the service of the N.Y.C. at New York in 1901 as a clerk in the engineering department. He transferred successively to the maintenance of way department in 1903, the transportation department in 1905 and the office of operating vice-president in 1912. Mr. Dugan was appointed assistant to the operating vice-president in 1920 and assistant to the executive vice-president in 1931. He had been assistant vice-president of operations and maintenance since 1948.

Alvin D. Dugan

As reported in the *Railway Age* of March 5, **W. M. Armstrong** has been appointed assistant vice-president of personnel of the CANADIAN NATIONAL SYSTEM at Montreal, Que. Mr. Armstrong was born at Ottawa, Ont., on July 5, 1895, and attended Ottawa Collegiate Institute and Queens University, Kingston, Ont. (B. Sc. in C.E., 1920). During World War I (1915-1919) he was with the Canadian Army overseas and was attached to the Royal Air Force for one year. Mr. Armstrong entered railroad service in 1920 and served until 1923 as assistant engineer, Grand Trunk Arbitration, at Montreal. He was appointed assistant engineer, Bureau of Economics, in 1923; assistant to assistant vice-president in 1924; office engineer in 1929; assistant director, Bureau of Economics, in 1937; and assistant chief, department of research and development, in 1939, all with the C.N. at Montreal. On December 1, 1942, Mr. Armstrong was appointed general manager of the C.N. Telegraphs at Toronto Ont., in which capacity he served until his recent appointment.



W. M. Armstrong

Duncan M. George has been appointed assistant to the president of the CANADIAN PACIFIC at Montreal, Que., to replace **Allan C. MacDonald,** who, as reported elsewhere in this issue, has been granted leave of absence to become director of shipbuilding in Canada's new Department of Defense Production. A photograph and biographical sketch of Mr. George appeared in *Railway Age* of March 11, 1950, page 106, at the time of his appointment as assistant to the vice-president of the C.P.'s Eastern region at Toronto, Ont., which position he relinquished to take on his new duties.

As reported in the March 12 *Railway Age*, **J. V. Maloney** has been appointed assistant vice-president in charge of freight traffic, United States lines, of the CANADIAN NATIONAL, with headquarters at Chicago. Mr. Maloney began his railroad career as a clerk in the freight traffic department of the Grand Trunk Western-Canadian National at Buffalo, N. Y., in 1912. He later held various positions in the department, becoming general agent in 1925. In 1930 he was transferred to Pittsburgh, Pa., and two years later returned to Buffalo as assistant general freight agent. Mr. Maloney was promoted to general freight agent in 1938, and in 1944 was advanced to freight traffic manager, in which capacity he was serving prior to his recent appointment.

J. V. Maloney

J. Frank Doolan, executive vice-president, operation, of the NEW YORK, NEW HAVEN & HARTFORD at New Haven, Conn., has retired. He had served the road for 46 years.

FINANCIAL, LEGAL & ACCOUNTING

Elmer E. Phipps, special agent in the real estate department of the BALTIMORE & OHIO, has been appointed general real estate agent, with headquarters at Baltimore, Md., succeeding the late **Robert E. Kennedy,** whose death was noted in the February 19 *Railway Age*. Mr. Phipps is a graduate in law of the University of Maryland and has completed courses at the American Institute of Real Estate Appraisers. He entered B. & O. service as clerk in the car service department at Baltimore in November 1921, and in February 1922 was transferred to the office of the treasurer. He entered the real estate department in December 1924, and, after advancing to various positions in that department, was appointed special agent in August 1945.

O. G. Edwards, assistant general counsel of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC, at Chicago, has retired after 47 years of railroad service. A native of Scranton, Pa., Mr. Edwards was educated at Whitman College, Walla Walla, Wash., and the University of Oregon Law School. Following service with the Union Pacific, he entered the Milwaukee's law department at Seattle, Wash., in October 1931 as assistant general attorney. He was appointed tax commissioner in 1936, and in February 1942 became assistant general solicitor. Mr. Edwards had served as assistant general counsel since October 1948.

OPERATING

J. M. Campbell has been appointed superintendent car service of the Central region of the CANADIAN NATIONAL at Toronto, Ont., as reported in the *Railway Age* of March 12. Mr. Campbell was born at Toronto, joined the Grand Trunk (C.N.) in 1916 as inwards clerk, and subsequently served in various positions until 1940, when he was promoted to freight car distributor. In January 1951 he was ap-

J. M. Campbell

SHIP C&O on "THE DOUBLE!"

Two Chesapeake and Ohio Gateways for Fast Freight from Pacific Coast Area to the East and Southeast

Two C&O all-rail service routes move freight on time-saving schedules from the Pacific Coast to destinations in the east and southeast. Shippers have their choice of the Chicago gateway or the all-rail car ferry route that bridges Lake Michigan.

THE CHICAGO GATEWAY

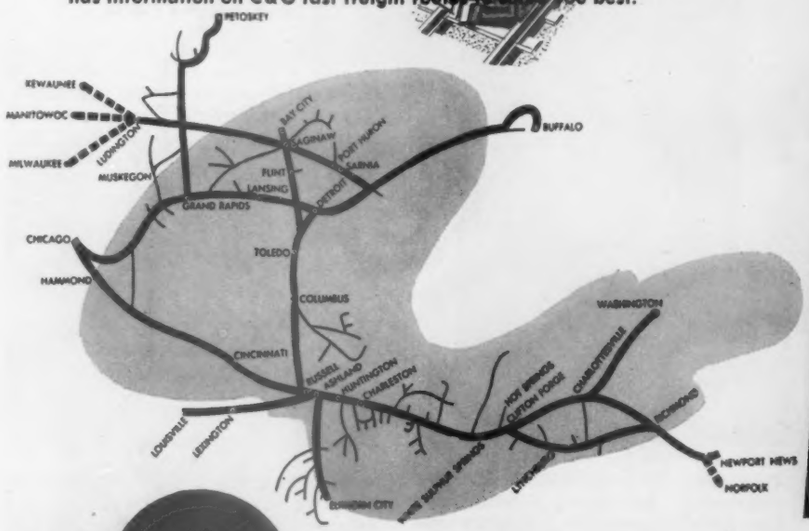
Via Pere Marquette District. Cars received from western lines are moved by manifest trains to direct connections with eastern lines at Detroit, East Buffalo and Suspension Bridge.

Via Chesapeake District. All western lines connect with manifest trains for through service to Cincinnati and destinations in Kentucky, West Virginia and Virginia. Direct connections with other railroads at Elkhorn City, Lynchburg, Richmond and Norfolk expedite freight to the southeast.

THE LAKE MICHIGAN GATEWAY

In daily operation the year around, C&O's (Pere Marquette District) great steel car ferries transfer cars received from connections at Kewaunee, Manitowoc and Milwaukee, Wisconsin across Lake Michigan to Ludington, Michigan, thence in symbol manifest trains to Buffalo or Suspension Bridge, New York, where connections are made with all diverging trunk line railroads serving eastern cities, including New York, Pennsylvania and the New England states. Connections are also maintained at Detroit and with all lines diverging from Toledo for points in Ohio, Maryland, Pennsylvania and West Virginia.

The Chesapeake and Ohio freight traffic representative in your city has information on C&O fast freight routes that suit you best.



CHESAPEAKE & OHIO INTERCHANGE AND CONNECTIONS

KEWAUNEE—G. B. & W.
MANITOWOC—C. & N. W.; Soo Line.
MILWAUKEE—C. & N. W.; C. M. St. P. & P.; Soo Line.
CHICAGO—A. T. & S. F.; C. & E. I.; C. & N. W.; C. B. & Q.; C. G. W.; C. M. St. P. & P.; C. R. I. & P.; G. M. & O.; I. C.; Soo Line, Wabash.
INDIANA JUNCTIONS—I. H. B.—Indiana Harbor; E. J. & E.—Porter or Griffith; NKP—Belfast; C. I. & L.—Michigan City.
TOLEDO—Chesapeake District; B. & O.; N. Y. C. & St. L.; N. Y. C.; W. & L. E.; P. R. R.
DETROIT—Can. Pacific.
PORT HURON—Gd. Trunk; Can. Nat.
CLARE, THOMPSONVILLE—Ann Arbor R. R.
NIAGARA FRONTIER—D. L. & W.; Erie; L. V.; N. Y. C.; P. R. R.
CINCINNATI—L. & N.; Southern; N. & W.
ELKHORN CITY, KY.—Clinchfield R. R.
LYNCHBURG, VA.—Southern
RICHMOND, VA.—A. C. L.; S. A. L.
NORFOLK, VA.—A. C. L.; S. A. L.; Norfolk Southern.

THE CHESSIE ROUTE FOR *FAST FREIGHT*

CHESAPEAKE AND OHIO RAILWAY

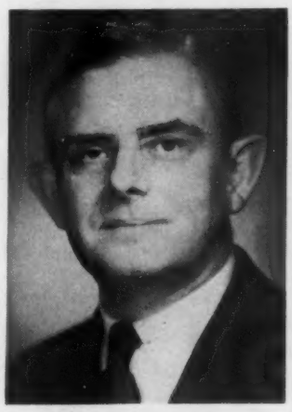
C&O FOR PROGRESS

pointed traveling car service agent at Toronto, which position he held until his recent promotion.

Milton W. Kirby, Jr., assistant trainmaster of the SOUTHERN at Atlanta, Ga., has been advanced to terminal trainmaster at John Sevier terminals, Knoxville, Tenn.

Louis Wayne Awe, whose promotion from assistant superintendent to superintendent of the ELGIN, JOLIET & EASTERN, at Gary, Ind., was announced in the February 12 *Railway Age*, was born on May 27, 1906, at Joliet, Ill., where he graduated from high school in 1925. In September of that year he joined the E. J. & E. at Joliet as brakeman, becoming conductor in 1929. From October 1942 to September 1945 Mr. Awe was with the Military Railway Service in North Africa and Italy, subsequently returning to the E. J. & E. as conductor. He was appointed transportation inspector in January 1947 and assistant superintendent at Gary the following August.

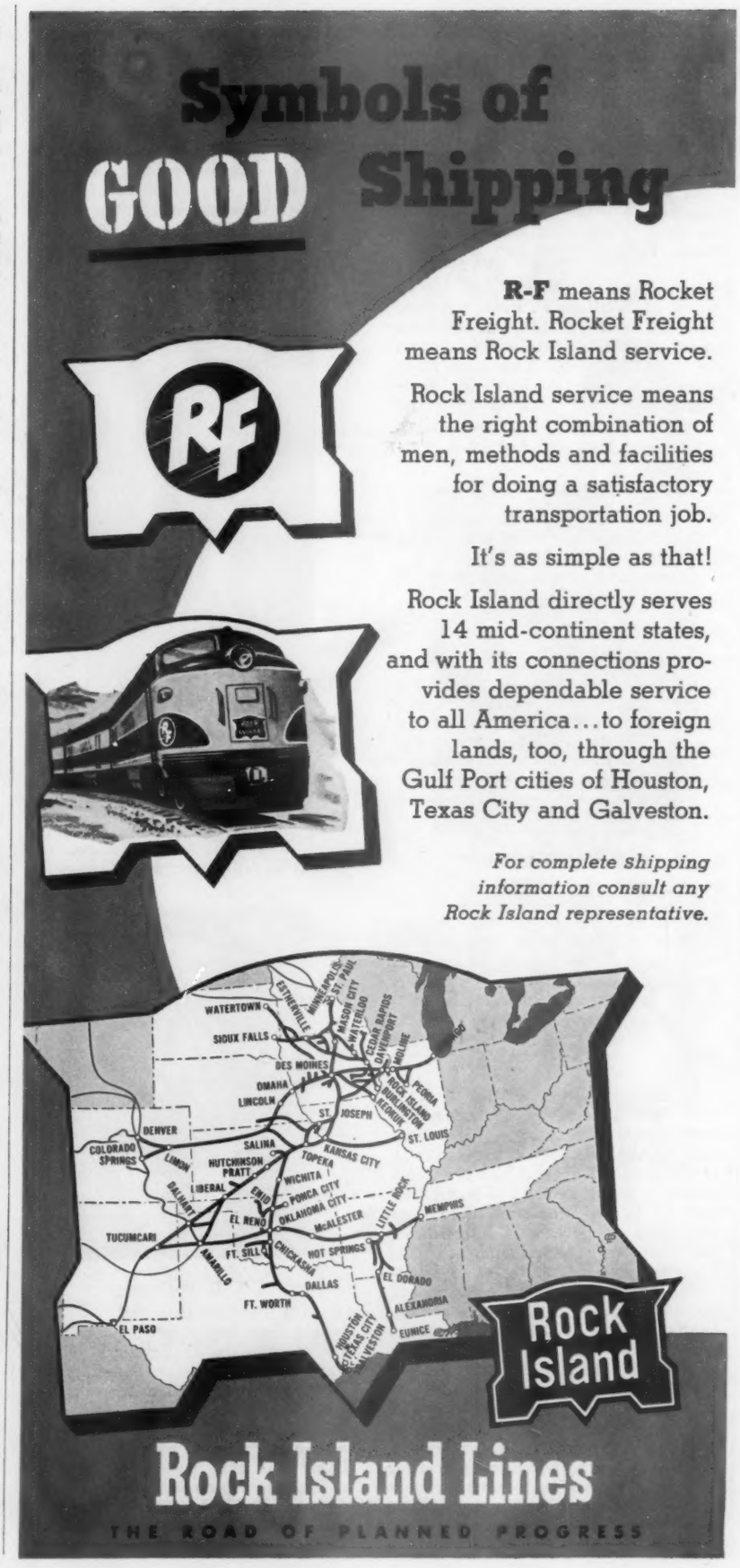
As reported in the *Railway Age* of March 5, **J. R. White** has been appointed general manager of communications of the CANADIAN NATIONAL at Toronto, Ont. Mr. White was born at Ottawa, Ont., on December 8, 1900, and was graduated from the University of Toronto in 1923. He entered the service of the C.N. in the operating department at Battle Creek, Mich., and in 1924 transferred to the bureau of



J. R. White

economics at Montreal, Que. In 1929 he served in the Bureau of Railway Economics at Washington, D. C., and in 1931 returned to the C.N. as assistant to the vice-president in charge of subsidiary companies. The following year he moved to the C.N. Telegraphs as supervisor of budgets, subsequently being appointed chief of tariffs, commercial manager and chief of commercial operations.

Paul R. Goulett, assistant general manager of the NEW YORK, NEW HAVEN & HARTFORD at New Haven, Conn., has been promoted to general manager of operation and transporta-



tion, coincident with the retirement, reported elsewhere in this issue, of **J. Frank Doolan,** executive vice-president, operation. **William A. Hurley,** assistant general manager, has been appointed assistant to Mr. Goulett, with headquarters as before at New Haven.

E. P. Brown has been appointed trainmaster, Pennsylvania division, of the NEW YORK CENTRAL, at Jersey Shore, Pa.

As reported in the *Railway Age* of March 12, **William F. Betts** has been appointed assistant to chairman—statistics of the Car Service Division of the ASSOCIATION OF AMERICAN RAILROADS at Washington, D. C. Mr. Betts joined the A.A.R. staff in 1936 and served as car service agent at Dallas, Tex.; New York; Philadelphia, Pa.;

William F. Betts

and Kansas City, Mo. In 1942 he became chief clerk of the Car Service Division at Washington and in 1948 was named statistician of the division, in which capacity he served until his recent appointment. In his new position, Mr. Betts will have general charge of all statistical work in the division.

As reported in the March 5 *Railway Age,* **James G. Metcalfe** has been appointed assistant general manager of the LOUISVILLE & NASHVILLE at Louisville, Ky., and has been succeeded as superintendent of transportation by **T. D. Williams.** Coincident with these changes, **W. G. McGowan** was promoted to superintendent of the Louisville division. A native of Louisville, Mr. Metcalfe has held various positions with the L. & N. since coming to that road in 1903 as rodman on its Birmingham division. After serving as clerk in the trainmaster's office at Middlesboro, Ky., he held the positions of yardmaster at Appalachia, Va., and Corbin, Ky., and assistant trainmaster on the old Knoxville division. Subsequently he was advanced to trainmaster and later to assistant superintendent on the Cincinnati division. In 1924 he was promoted to superintendent at Paris, Ky., being appointed to the newly-created post of assistant superintendent of transportation in 1936. Mr. Metcalfe became superintendent of transportation in 1937, in which position he served until his recent appointment.

Mr. Williams is a native of Nelson county, Ky., and has served with the L. & N. since January 1926, when he was employed as an instrumentman on the Louisville division. He later served as assistant engineer, track supervisor, assistant trainmaster and trainmaster

James G. Metcalfe

at various points. In September 1945 he was appointed assistant superintendent-chief dispatcher of the Pensacola division and, in November 1946, general superintendent at Louisville. He was made assistant superintendent of transportation in January 1949, in which position he had supervision over prevention of loss and damage to

T. D. Williams

freight, injuries to persons and damage to property. In February 1950 he was appointed assistant superintendent of transportation directly concerned with operation of trains, revision of schedules, both freight and passenger, and other related matters. Mr. Williams held that position at the time of his latest promotion.

Starting with the L. & N. as an operator on the Eastern Kentucky division in January 1914, Mr. McGowan served subsequently as agent and operator at various points on the same division prior to his appointment as dispatcher and later as chief dispatcher on that division. During the early part of World War II he was headquartered at Mobile, Ala., as chief dispatcher, and in April 1943 moved to Lexington,

W. G. McGowan

Ky., as assistant trainmaster. In December 1946 he was advanced to terminal trainmaster at New Orleans, La., and in January 1948 to assistant superintendent of the Eastern Kentucky division. Mr. McGowan was transferred to the Louisville division in October 1948 as assistant superintendent, from which post he was recently promoted.

TRAFFIC

Earl E. Young, general freight agent of the ATLANTIC & DANVILLE, has been promoted to the newly created position of traffic manager, with headquarters as before at Norfolk, Va.

L. B. Freeman, assistant general freight agent of the GRAND TRUNK WESTERN, has been appointed freight

L. B. Freeman

traffic manager of the CANADIAN NATIONAL lines in the United States. **Leon A. Veroneau,** general freight agent of rates, has been made

freight traffic manager in charge of rates for the Grand Trunk. Both men will continue to maintain their headquarters at Chicago. Mr. Freeman started with the G.T. in 1918 as a junior clerk at Chicago, and later served in the freight tariff bureau and general freight department. In 1925 he resigned to accept a position in the traffic department of Armour & Co. Following his return to the Grand Trunk in 1927 he served in a clerical capacity until 1947 when he became general agent at Birmingham, Ala. Two years later he was transferred to Philadelphia, Pa., and in March 1950 was appointed assistant to the freight traffic manager at Chicago. Mr. Freeman was advanced to assistant general freight agent last October.

Leon A. Veroneau

Mr. Veroneau began his career with the Grand Trunk in the freight department at Montreal, Que., in 1902 as an office boy. He moved to Chicago in 1906 as yard clerk and timekeeper, and in 1918 became chief clerk to the assistant general freight agent, being appointed chief of the tariff bureau two years later. He was made assistant general freight agent in 1929, and was advanced to general freight agent of rates in 1943.

H. C. Hallmark, for many years freight traffic manager in charge of rates and divisions of the SOUTHERN PACIFIC, has retired. Since 1947, Mr. Hallmark had been on leave from the S.P., and had been serving as chairman of a special railroad committee of the Western Traffic Executive Committee handling the government's reparations cases.

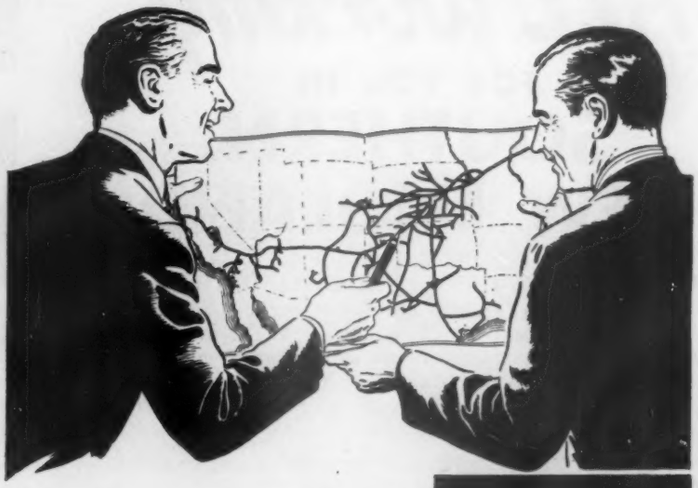
E. I. Bowman has been appointed assistant general freight agent of the NASHVILLE, CHATTANOOGA & ST. LOUIS at Nashville, Tenn., succeeding **J. D. Reynolds,** who has resigned.

C. J. Dombrow, assistant passenger traffic manager of the DENVER & RIO GRANDE WESTERN at Denver, Colo., has been promoted to general passenger agent, with headquarters at Chicago, where he will exercise supervision on behalf of the passenger de-

Your

answer man

with the Santa Fe



Where's my car? What about special handling? How about rates?

it pays to ship

Bring on your freight questions, open up your freight problems. Your Santa Fe freight representative has the answers or knows where to get them quickly.

He is either in your town or has your town assigned to him. His knowledge of freight problems in your territory, plus the "know how" of Santa Fe's entire organization of transportation specialists, is at your service, just by a telephone call.

Let him tell you why and how *it pays to ship Santa Fe all the way!*

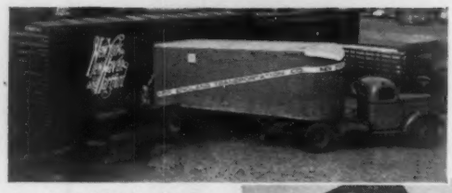
Santa Fe

all the way

F. H. Rockwell
General Freight Traffic Manager
Chicago 4, Illinois

Modern Bulk Track Unloading Facilities

Teletype Recording of Car Movements



Coordinated Rail-Truck Service

Modern Loading and Unloading Equipment

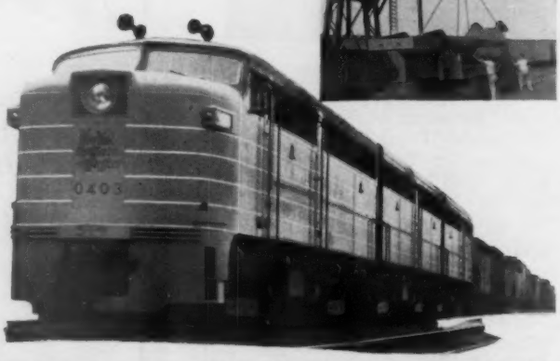
ALL Working

FOR YOU IN SOUTHERN NEW ENGLAND

Specify "via NEW HAVEN RAILROAD" for the most efficient ***overnight freight service*** throughout Southern New England and Southeastern New York. NEW HAVEN connections are made at 15 freight gateways with 13 railroads serving the south, west, north and east — linking NEW HAVEN directly by rail with all points in the United States, Canada and Mexico.

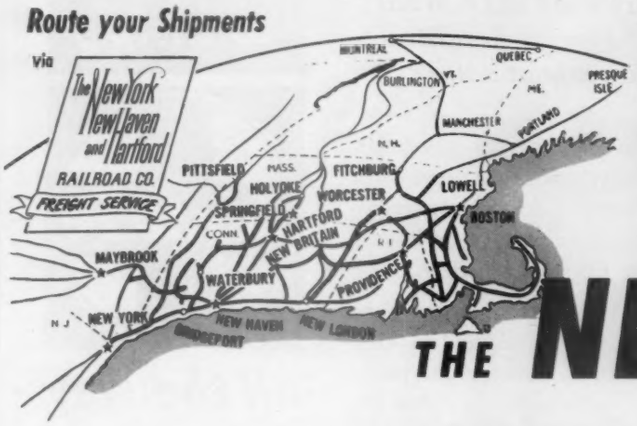
When you want the fastest, most dependable, well-rounded freight service . . .

Leave It To . . . . .



Route your Shipments

Via The New York New Haven and Hartford RAILROAD CO. FREIGHT SERVICE



THE NEW HAVEN RAILROAD

CONTACT THESE TRAFFIC AGENCIES FOR ROUTES, RATES AND SERVICE:

General Freight Traffic Dept. — South Station, Boston 10, Mass. HUbbard 2-7800

ATLANTA 3, GA.
712 Healey Bldg. (WAlnut 2271)

BRIDGEPORT 3, CONN.
Water Street (Tel. 4-0161)

BROCKTON 35, MASS.
104 Centre St. (Tel. 8083)

BUFFALO 3, N. Y.
444 Ellicott Sq. Bldg. (CL. 3242)

CHICAGO 4, ILL.
327 So. LaSalle St. (HA. 7-6632)

CLEVELAND 14, OHIO
1799 Union Comerce Bldg. (MAin 1-6993)

DETROIT 2, MICH.
3-220 General Motors Bldg. (TRinity 5-7373)

FALL RIVER, MASS.
215 Academy Bldg. (Tel. 5-7421)

HARTFORD 3, CONN.
190 Morgan St. (Tel. 2-6101)

MANCHESTER, N. H.
202 Lemay Bldg. (Tel. 5-8713)

NEW HAVEN, CONN.
Railroad Station (Tel. 5-0131)

NEW LONDON, CONN.
Union Station (Tel. 2-5324)

NEW YORK 54, N. Y.
82 Willis Ave. (MOtt Haven 9-5000)

PHILADELPHIA 7, PA.
1138 Widener Bldg. (RI. 6-4790)

PITTSBURGH 19, PA.
2522 Koppers Bldg. (AT. 1-5040)

PORTLAND 4, ME.
477 Congres St. (Tel. 3-3826)

POUGHKEEPSIE, N. Y.
44 Cottage St. (Tel. 6233)

PRESQUE ISLE, ME.
284-A Main St. (Tel. 7891)

PROVIDENCE 3, R. I.
Union Station (DExter 1-5700)

ST. LOUIS, MO.
1815 Railway Exchange Bldg. (CE. 7289)

SAN FRANCISCO 5, CAL.
309 Monadnock Bldg. (YUkon 6-1025)

SPRINGFIELD 3, MASS.
1694 Main St. (Tel. 4-4810)

WATERBURY 35, CONN.
45 Freight St. (Tel. 3-2151)

WORCESTER 8, MASS.
43 Madison St. (Tel. 5-4311)

partment in the D.&R.G.W.'s eastern territory. **H. B. Nies** succeeds Mr. Dombrow as assistant passenger traffic manager at Denver.

R. H. Gustafson, formerly traffic agent of the CHICAGO GREAT WESTERN at Milwaukee, Wis., has been advanced to general agent at Indianapolis, Ind., succeeding **L. R. Hendrickson,** who has resigned.

Thomas J. Muldowney has been appointed general agent of the RUTLAND at Chicago, replacing **Harry Warner,** who, because of illness, has been granted a six months' leave of absence.

As reported in the *Railway Age* of March 26, **Edward A. Ryder** has been appointed freight traffic manager of the Central region of the CANADIAN NATIONAL at Toronto, Ont. Mr. Ryder was born at Havelock, N. B., on October 20, 1899, and studied traffic management with LaSalle Extension University. He served with the Canadian Expeditionary Forces from February 1917 to February 1919, entering railroad service in April 1920 as clerk in the operating department of the Intercolonial (now C.N.) at Moncton, N. B., transferring to Newcastle, N. B., in June 1921. Mr. Ryder held various clerical positions with the traffic department of the C.N. from May 1924 until May 1944. On the latter date he was appointed assistant to general freight traffic manager at Montreal and in August 1946 became assistant to vice-president in charge of traffic at Montreal. In May 1949 he was appointed traffic manager of the Atlantic region at Moncton, which position he held until his recent appointment.

Edward A. Ryder

J. Earl Tweedy, general mail and baggage agent of the CANADIAN PACIFIC at Winnipeg, Man., has been transferred to Montreal, Que., with supervision over that type of traffic on all C.P. lines east of Fort William, Ont. He succeeds **Raoul Bourgeois,** who has retired after more than 46 years of service with the C.P.'s mail and baggage traffic department. **J. D. H. Fraser,** district mail and baggage agent at Calgary, Alta., replaces Mr. Tweedy as general mail and baggage agent at Winnipeg.

Edward Plack, assistant general agent of the SEABOARD AIR LINE, has been promoted to general passenger agent, with headquarters as before at Washington, D. C. The road also announced promotion of **Godfrey L. Borden,** division passenger agent, to assistant general passenger agent, with headquarters as before at Richmond, Va. Mr. Plack, a native of Baltimore, Md., began his railroad career in that city, becoming associated with the Seaboard in 1925 as passenger agent at Jacksonville, Fla., and later occupying positions of increasing importance in the passenger traffic department at Baltimore. He was transferred to Washington in 1931.

As reported in the *Railway Age* of March 26, **Charles R. Murray** has been appointed freight traffic manager of the CANADIAN NATIONAL, in charge of the rate division, Canadian lines, at Montreal, Que. Mr. Murray was born in Nova Scotia and entered railroading in June 1908 as an operator with the Canadian Government Railways (now C.N.). After serving overseas in World War I, he returned to the C.N.

Central of Georgia Inaugurates Truck Service to Facilitate Handling of Shipments

Time-saving rail-truck service, now in operation on the Central of Georgia Railway, affords faster and better handling of less-than-carload shipments. Through a fleet of new trucks and trailers, manned by experienced drivers, this combination service is to the advantage of shippers and consignees having LCL shipments routed via the Central of Georgia.

Like all rail traffic, rail-truck operation offers the protection, safeguards, and advantages of railroad responsibility, since such shipments move under railway bills of lading.

The co-ordination of rail-truck service shortens the time in transit between shipper and consignee of less-than-carload freight. It saves box car days and in this way contributes in a substantial way to the box car supply of carload shippers.

Fast rail-truck service for shippers and consignees is another example of progress on the Central of Georgia. Our representatives will be glad to show you *how* it can speed your shipments.

CENTRAL OF GEORGIA RAILWAY

At his command—the movement of a hundred trains.

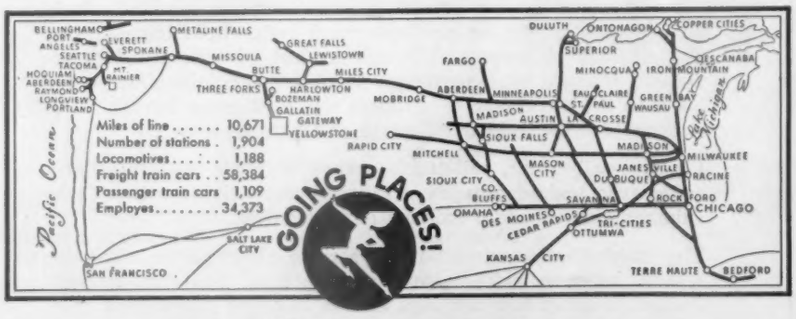
DOING THINGS!

Since World War II The Milwaukee Road's been busy building for the future. Everything in the plant has been double-checked, improved or replaced.

The men at the throttle of The Milwaukee Road these days are young-minded and vigorous. They're doing things and their Road's going places. It's geared to a fast pace.

Milwaukee Road agents are in principal cities. Ask the one nearest you about your shipping. You'll find him an experienced and forward-looking transportation man who'll say it *can* and *will* be done.

SHIP—TRAVEL



THE MILWAUKEE ROAD

ROUTE OF THE HIAWATHAS

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD

in July 1919, holding various positions until his appointment as assistant general freight agent at Toronto, Ont. In 1940 he was transferred to Montreal to assume charge of rates for lines from Armstrong, Ont., and West Ft. William eastward. In June 1945 Mr. Murray

Charles R. Murray

was appointed general freight agent at Montreal and in August 1948 became assistant freight traffic manager in charge of rates, tariffs and divisions of the system at Montreal, in which capacity he served until his recent appointment.

ENGINEERING AND SIGNALING

As reported in the *Railway Age* of February 12, **I. D. Talmadge** has been appointed engineer maintenance of way of the LEHIGH & HUDSON RIVER at Warwick, N. Y. Mr. Talmadge was born at Mountain Lake, N. Y., on June 7, 1894, and entered railroad service on September 1, 1911, on the engineer corps of the New York, Ontario & Western at Middletown, N. Y. From July to December 1918 he served with the United States Army, and in July 1919 was appointed assistant roadmaster of the N.Y.O.&W. at Walton, N. Y. He became roadmaster in July 1920, valuation engineer in March 1941, and district engineer in September 1942, all with the N.Y.O.&W. at Middletown. In November 1944 Mr. Talmadge joined the L.&H.R. at Warwick as roadmaster, in which capacity he served until his recent appointment.

Edgar Winans, signal engineer of the ATCHISON, TOPEKA & SANTA FE, at Los Angeles, Cal., has retired, and **Edgar R. Frachiseur,** general signal supervisor at Los Angeles, has been promoted to signal engineer, succeeding Mr. Winans. **John Leonard Bartlett,** signal supervisor of the Los Angeles division, at San Bernardino, Cal., has been promoted to general signal supervisor, succeeding Mr. Frachiseur.

Mr. Winans was born near Springfield, Ohio, February 6, 1881, and spent his early years in Topeka, Kan., receiving his education in the Topeka

Johnny Careful...

PERFECT SHIPPING BOSS on the M. & St. L.

HE CALLS himself John B. Careful now, with a stenographer, desk and his own "Agency for Prevention of Loss and Damage." But he's the same Johnny Careful who has been full-time boss for so many years on

The Minneapolis & St. Louis Railway

Johnny Careful tracks down Loss and Damage Claims and the mishaps that cause them. Also, he presides each April over America's celebration of Perfect Shipping Month. In April, Shippers and Railroads take stock of progress toward the goal of completely efficient freight handling.

But nowadays, every month the year round, industry and the workers who pack, label and load freight demonstrate greater efficiency. Railroads, with constantly improved equipment, provide the finest transportation ever known.

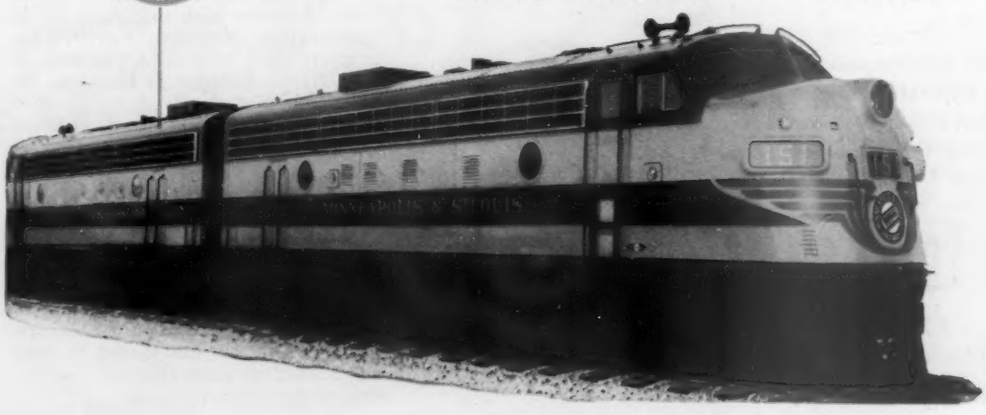
Perfect Shipping Month

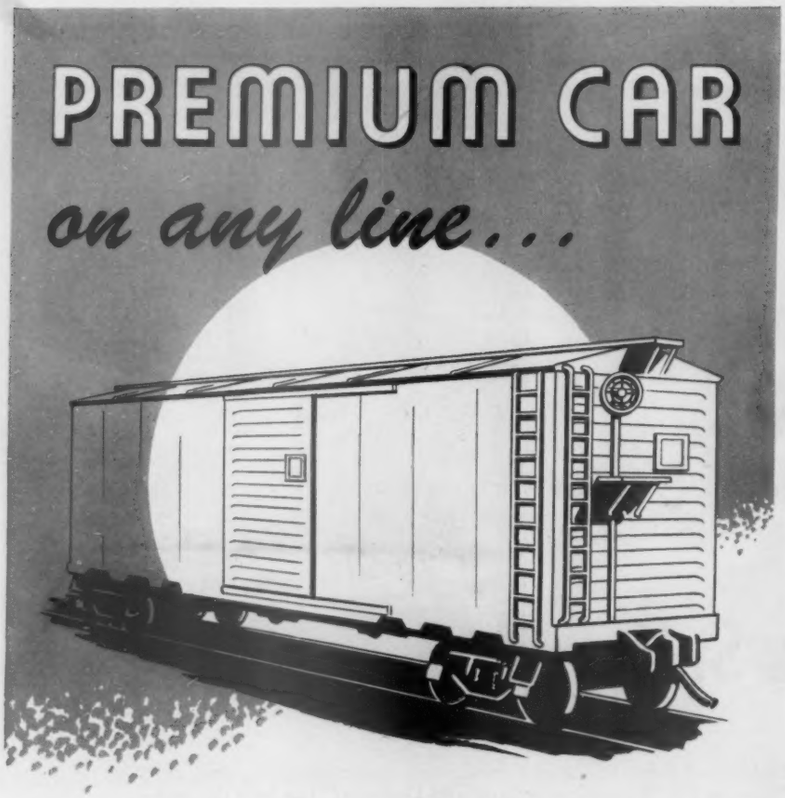
is celebrated 12 times a year on the M. & St. L., with Johnny Careful in charge. In the Great Midwest, M. & St. L. freight service for Shippers and Receivers, for Agriculture and Industry, for Connecting Roads, is as nearly perfect as teamwork of skilled workers can make it. Helping also are growing fleets of modern cars and locomotives, with Diesels now powering all trains.

THE MINNEAPOLIS & ST. LOUIS RAILWAY CO. — PEORIA GATEWAY

The MINNEAPOLIS & ST. LOUIS Railway

TRAFFIC OFFICES IN 36 KEY CITIES





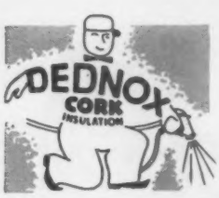
Dednox-Insulated for Condensation Control

● This car, and 250,000 others like it, are saving modern railroads thousands of dollars in claims every year by preventing damage from water due to roof condensation. Dednox was developed at the request of many dissatisfied shippers, specifically for the purpose of insulating box car interiors...And many shippers who cannot get Dednox-insulated cars prefer to ship by other means, rather than chance impairment of lading in uninsulated cars.

Application of Dednox on contract jobs is continuously supervised by a Dednox inspector. No priming coat is needed. One application is sufficient—and lasts indefinitely. Dednox does not contain any water, having 2/3 less shrinkage than emulsion-type asphalts, and *over 10 times the amount of insulating cork content!*

Get full details on Dednox insulation to help cut damage claims and reduce car maintenance costs.

DEDNOX was the *first successful* car insulation. It is made from highest quality cutback asphalt, containing at least 60% by volume cork granules. Its K-Factor (heat transmission rate) is .36.



DEDNOX
INCORPORATED
7750 WEST 61ST PLACE
SUMMIT, ILLINOIS
(Chicago Suburb) POrtsmouth 7-7160

public schools and at Washburn College. He first entered service with the Santa Fe as a draftsman in the signal engineer system office at Topeka on April 1, 1906; was appointed assistant signal supervisor, Eastern Lines, June 1, 1909; chief draftsman in the system office January 1, 1910, and assistant signal engineer, Eastern Lines, on May 1, 1910. On December 1, 1911, he transferred to Los Angeles as signal supervisor of the Coast Lines. On July 1, 1920, his title was changed to signal engineer.

Mr. Frachiseur was born at Temple, Tex., December 25, 1906. He attended public schools at Temple and Brownwood, Tex., and graduated from Texas A.&M. College with a degree in electrical engineering. He entered service with the Santa Fe's Gulf Lines in August 1929 as a signal helper, and served in various capacities in signal construction work until December, 1940, when he was transferred to the office of the signal engineer system at Topeka. Mr. Frachiseur served as a draftsman until September 1942, and as assistant engineer until July 1950, when he was transferred to the Coast Lines as general signal supervisor.

MECHANICAL

The Mulberry shops of the SACRAMENTO NORTHERN at Chico, Cal., will be consolidated with the Sacramento shops of the parent WESTERN PACIFIC, under supervision of **E. E. Gleason,** chief mechanical officer of the W.P. The consolidation results from conversion of both roads to diesel-electric power—the W.P. from steam, the S.N. from interurban electric operation.

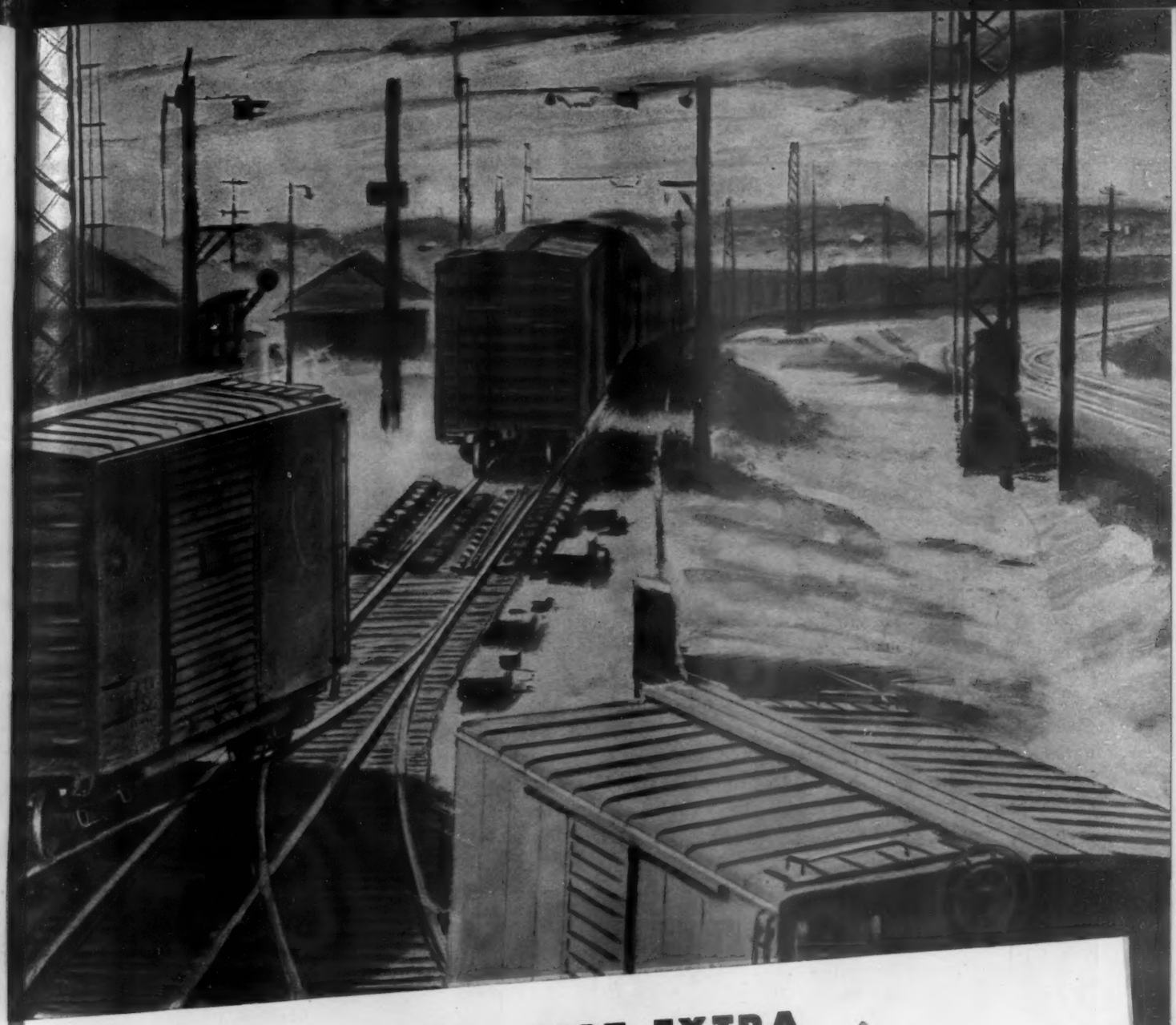
S. R. Tilbury, fuel supervisor, Eastern Lines, of the ATCHISON, TOPEKA & SANTA FE at Topeka, Kan., retired on March 1 after 38 years of service.

W. H. Marshall has been appointed assistant master mechanic of the CHESAPEAKE & OHIO at Newport News, Va. His former position of general foreman has been abolished.

Philip H. Hatch, general mechanical superintendent of the NEW YORK, NEW HAVEN & HARTFORD at New Haven, Conn., has retired after 28 years of service with that road. He is succeeded by **Kenneth Cartwright,** formerly chief mechanical engineer at New Haven. **George J. Higgins,** superintendent of the Readville (Mass.) shops, has been appointed assistant general mechanical superintendent.

SPECIAL

Earl E. Breese, assistant to the president of the TENNESSEE CENTRAL at Nashville, Tenn., has retired from that road's employ. At the request of the Economic Cooperation Administration, however, he has agreed to serve *(Continued on page 104)*



WHERE THAT EXTRA 1½¢ PER DAY *pays off!*

Down the hump every 15 seconds . . . small time for Tower men to exercise control.

Under high speed operation some cars are coupling at two miles per hour, some at five miles, and not a few at six, seven and ten miles per hour . . . Out of control! It happens every day. It happens in the best of yards, and it happens from coast to coast.

The cost? Damaged cars . . . *many of them* . . . and damaged lading . . . *far too much of it.*

And how to stop this loss? Damage prevention begins with the car. That's the answer. Better cushioning equipment . . . WAUGHMAT TWIN CUSHIONS.

TWIN CUSHIONS soon pay for themselves in lessened lading-damage costs, lessened car repairs, fewer car-days out of service and longer car life. For new cars or draft gear replacement, on existing cars, TWIN CUSHIONS are the lowest cost big improvement you make on any car.

WAUGHMAT *Twin Cushions*

WAUGH EQUIPMENT COMPANY, New York • Chicago • St. Louis • Canadian Waugh Equipment Company, Montreal

The premium you pay for Waughmat Twin-Cushion premium car and lading protection is estimated to be less than 1½¢ per day per car . . . a small charge for the car and lading insurance provided by Waughmat Twin-Cushions

ANNOUNCING

The Pullman-Standard

Compartmentizer

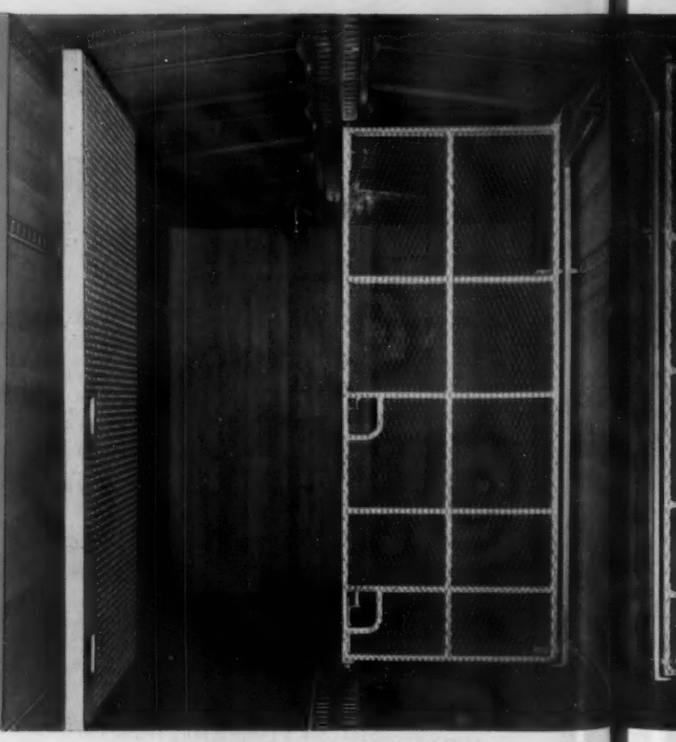
Tested and Proved . . . a Great Forward Step Toward Complete Protection of Lading Which Needs Securing, Including Mixed LCL Shipments. Cuts DAMAGE . . . Eliminates DUNNAGE . . . Saves DOLLARS!

Pullman-Standard offers the *Compartmentizer*, to *minimize* damage claims! It provides protective compartments . . . three to a car . . . each one quickly adjustable to any size or shape of load. Dunnage is eliminated, and one man alone locates . . . re-locates . . . or stores the handy gates.

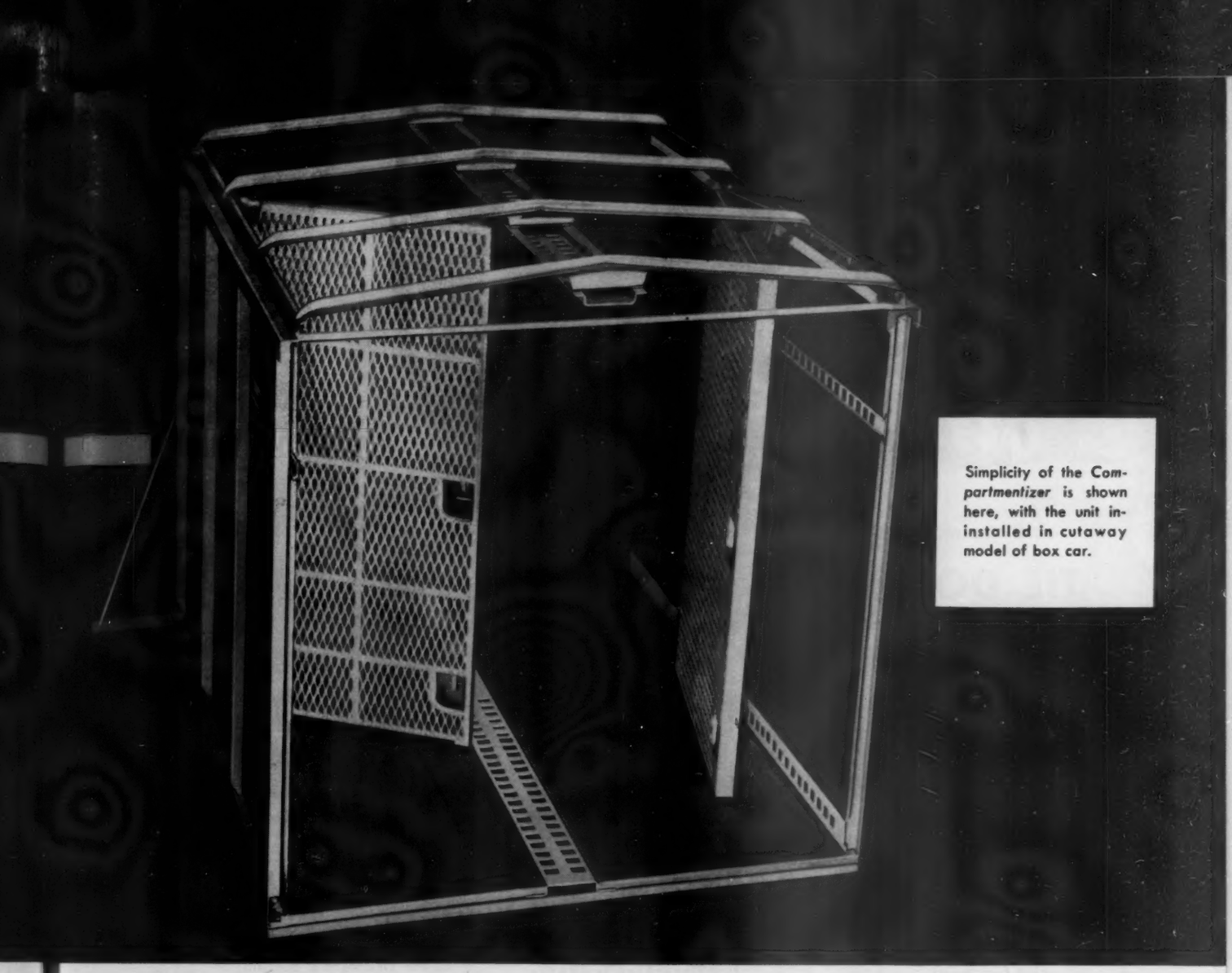
Here's how it works. With the gates open, the lading is placed in one end of the car. The *Compartmentizer* is moved tightly against the load (adjustable within a 3-inch limit) holding it immovable. When the *Compartmentizer* is closed it is secured and sealed so that the lading is undisturbed to destination. The other end of the car is similarly loaded. Then the third, or center compartment is loaded . . . for drop shipment, if desired.

Speedy, simple, easy-to-use, the *Compartmentizer* brings new savings and dependability for railroads and shippers alike!

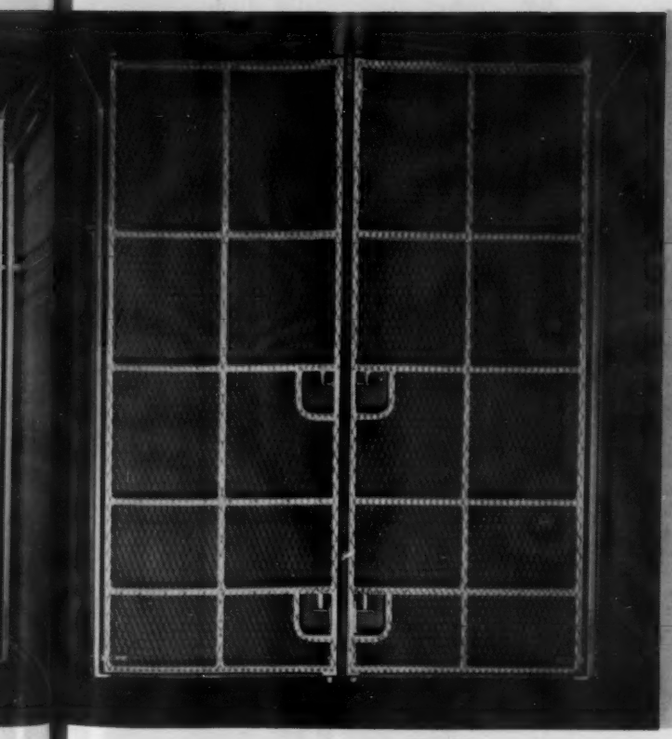
The lading is in place. The *Compartmentizer* is about to be closed tightly against the shipment. The gates will be locked . . . top, sides and bottom . . . then sealed with a standard box car seal, if desired. No dunnage! No costly labor or delays!



The two *Compartmentizer* gates ride independently on trolley rails extending the length of the car. For loads of varying shapes (canned goods and lineolum, for instance) the gates may be locked in staggered positions, each item held securely.



Simplicity of the *Compartmentizer* is shown here, with the unit installed in cutaway model of box car.



7 Standout Advantages....

1. Nearest thing to damage-proofing! Better than truck or trailer loading for LCL freight, or a full car of lading.
2. Dunnage eliminated—seldom is any bracing, strapping, or tying necessary.
3. Sturdy gates of channel steel, covered with expanded metal, are flush—no projections to injure shipment.
4. Quick and easy—nothing to do but move gates against load, and lock. One man can move them to any position—no high labor costs.
5. No loose parts, braces, or contraptions to get lost. No nails or dunnage to clean out. No delays. No unnecessary labor costs. No expensive replacements.
6. Flexible and adaptable to loads of almost any character.
7. *Compartmentizer*-equipped car need not be classed as "special purpose." Gates store compactly at end of car. Higher adaptability means better service to shippers... fast turnaround means fewer cars required.

COMPARTMENTIZER FURNISHED THESE 3 WAYS:

In new Pullman-Standard Box Cars ready-equipped with *Compartmentizers* (including installation in cars now on order);

As "package" *Compartmentizer* units which can be applied in railroad or other car-building shops;

We can equip most present cars with *Compartmentizers*, in our shops.

Write or Phone Your Nearest Pullman-Standard Office

y rails
canned
stag-

's universal! When the car is used for general purposes, the Com-*artmentizer* is stored *flat* against the end of the car... out of the way ... occupying only a 4¼-inch space. Only one man is required to ake the conversion, in a matter of minutes!

Pullman-Standard

CAR MANUFACTURING COMPANY

CHICAGO • NEW YORK • CLEVELAND • WASHINGTON, D. C.
PITTSBURGH • BIRMINGHAM • SAN FRANCISCO

ANNOUNCING

The Pullman-Standard

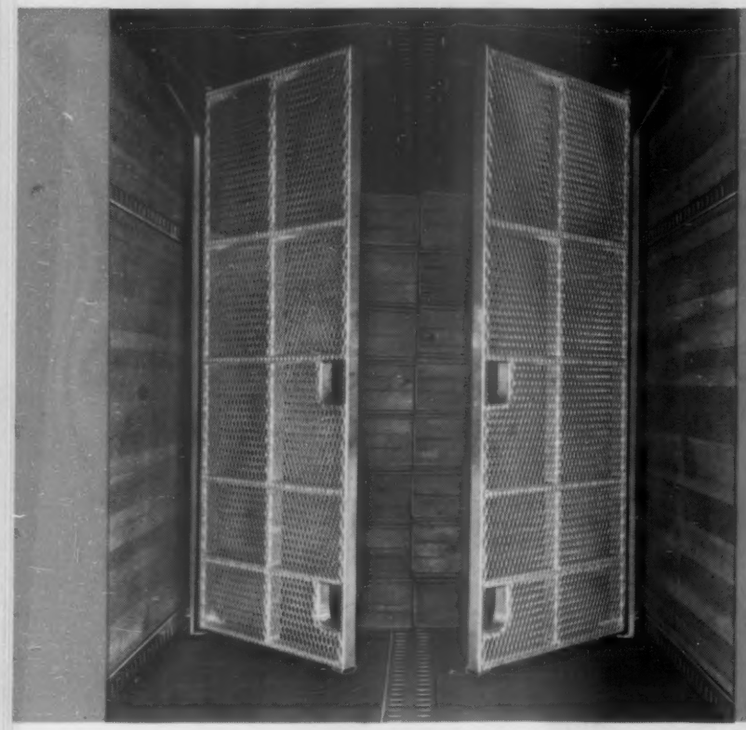
Compartmentizer

Tested and Proved . . . a Great Forward Step Toward Complete Protection of Lading Which Needs Securing, Including Mixed LCL Shipments. Cuts DAMAGE . . . Eliminates DUNNAGE . . . Saves DOLLARS!

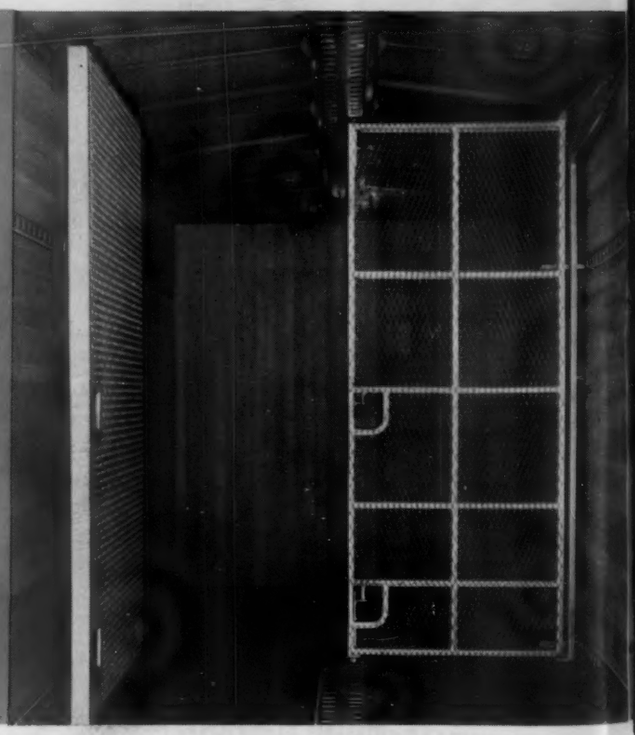
Pullman-Standard offers the *Compartmentizer*, to *minimize* damage claims! It provides protective compartments . . . three to a car . . . each one quickly adjustable to any size or shape of load. Dunnage is eliminated, and one man alone locates . . . re-locates . . . or stores the handy gates.

Here's how it works. With the gates open, the lading is placed in one end of the car. The *Compartmentizer* is moved tightly against the load (adjustable within a 3-inch limit) holding it immovable. When the *Compartmentizer* is closed it is secured and sealed so that the lading is undisturbed to destination. The other end of the car is similarly loaded. Then the third, or center compartment is loaded . . . for drop shipment, if desired.

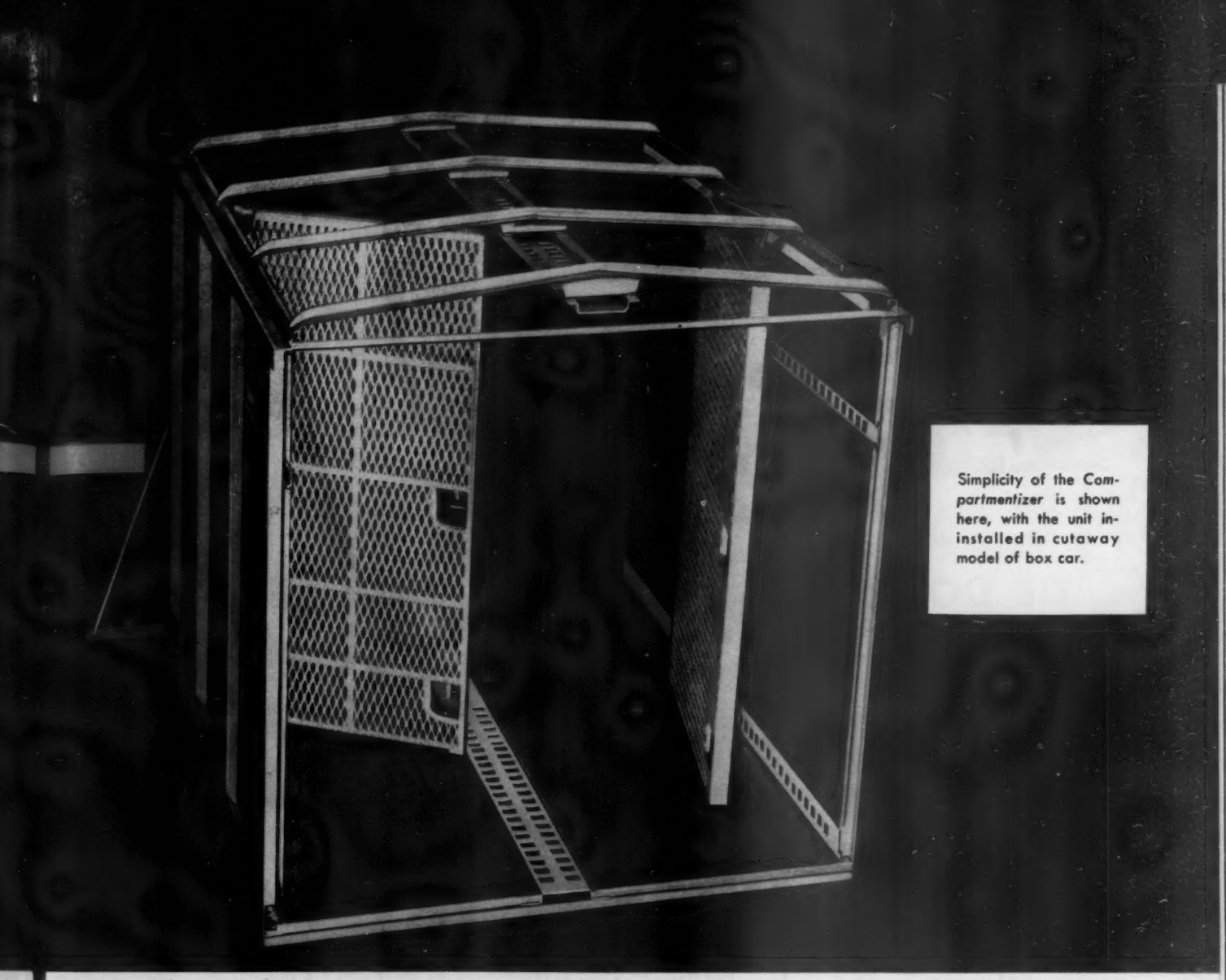
Speedy, simple, easy-to-use, the *Compartmentizer* brings new savings and dependability for railroads and shippers alike!



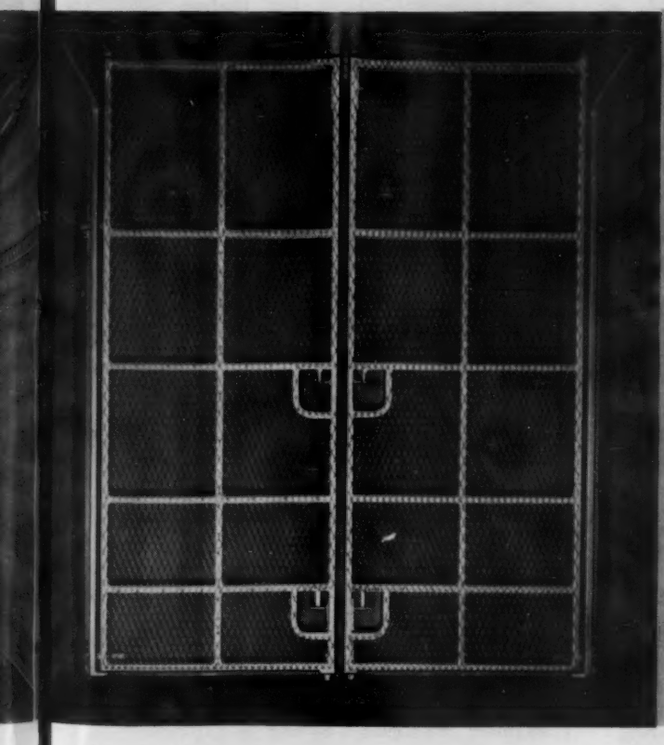
The lading is in place. The *Compartmentizer* is about to be closed tightly against the shipment. The gates will be locked . . . top, sides and bottom . . . then sealed with a standard box car seal, if desired. No dunnage! No costly labor or delays!



The two *Compartmentizer* gates ride independently on trolley rails extending the length of the car. For loads of varying shapes (canned goods and lineolum, for instance) the gates may be locked in staggered positions, each item held securely.



Simplicity of the *Compartmentizer* is shown here, with the unit installed in cutaway model of box car.



It's universal! When the car is used for general purposes, the *Compartmentizer* is stored *flat* against the end of the car . . . out of the way . . . occupying only a 4¼-inch space. Only one man is required to make the conversion, in a matter of minutes!

7 Standout Advantages....

1. Nearest thing to damage-proofing! Better than truck or trailer loading for LCL freight, or a full car of lading.
2. Dunnage eliminated—seldom is any bracing, strapping, or tying necessary.
3. Sturdy gates of channel steel, covered with expanded metal, are flush—no projections to injure shipment.
4. Quick and easy—nothing to do but move gates against load, and lock. One man can move them to any position—no high labor costs.
5. No loose parts, braces, or contraptions to get lost. No nails or dunnage to clean out. No delays. No unnecessary labor costs. No expensive replacements.
6. Flexible and adaptable to loads of almost any character.
7. *Compartmentizer*-equipped car need not be classed as "special purpose." Gates store compactly at end of car. Higher adaptability means better service to shippers . . . fast turnaround means fewer cars required.

COMPARTMENTIZER FURNISHED THESE 3 WAYS:

In new Pullman-Standard Box Cars ready-equipped with *Compartmentizers* (including installation in cars now on order);

As "package" *Compartmentizer* units which can be applied in railroad or other car-building shops;

We can equip most present cars with *Compartmentizers*, in our shops.

Write or Phone Your Nearest Pullman-Standard Office

Pullman-Standard

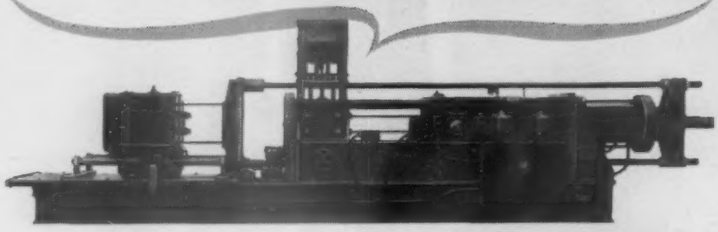
CAR MANUFACTURING COMPANY

CHICAGO • NEW YORK • CLEVELAND • WASHINGTON, D. C.
PITTSBURGH • BIRMINGHAM • SAN FRANCISCO

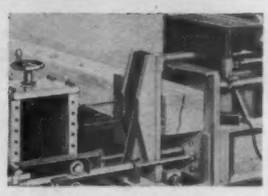
CUT TIE REPLACEMENT COSTS

WITH THE MODERN, AUTOMATIC GRAHAM

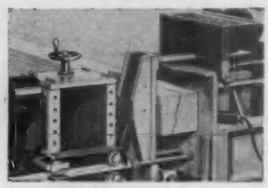
TIE DOWELLING MACHINE



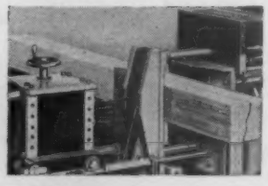
Dowelled ties—as proved in service—provide increased service life and reduce tie replacement costs to a minimum. Now . . . the Graham Tie Dowelling Machine has been designed and developed to reduce dowelling operations to lowest cost. Completely automatic, this modern machine applies Giant Grip Dowels into one or both ends of ties in a fraction of the time required by other methods. Investigate this machine today and give your road the benefit of its advantages in saving time, money and effort.



First Step—Ties are automatically fed into the machine, equalized for position and squeezed in the vise.



Second Step—Holes are automatically drilled slightly smaller than dowel size.



Third Step—Dowels are automatically screwed into tie by hydraulic pressure, completing operation. Tie is released and is then ejected by incoming tie.

Write today for Bulletin DM-1

GRAHAM TIE DOWEL SERVICE CO.

1201 HUNTINGTON BANK BUILDING • COLUMBUS, OHIO

(Continued from page 100)

for one year as head of a mission to install for the Royal State Railways of Thailand a system of accounting like that authorized by the Interstate Commerce Commission for use in the United States. Mr. Breese, who, with his wife, was scheduled to fly to his new post on March 25, will reside in Bangkok.

Mr. Breese received his education at the School of Commerce, New York University, and has completed 45 years of transportation service, having entered railway service with the Atchison, Topeka & Santa Fe in 1905. He subsequently held various positions, including those of paymaster and auditor of disbursements for the Detroit, Toledo & Ironton; general accountant on the Delaware & Hudson; auditor of the Hudson River Navigation Corporation; vice-president of the Hudson Steamboat Company, and comptroller for the Chicago, Springfield & St. Louis (now abandoned). Mr. Breese became associated with the T. C. as special representative of the president at Nashville in 1940, and was elected assistant to the president in 1946.

Earl E. Breese

OBITUARY

Albert A. Miller, former chief engineer, maintenance of way, of the Missouri Pacific Lines, who retired in October 1949, died on March 25 in Oklahoma City, Okla. Mr. Miller was born at Zanesville, Ohio, on September 28, 1879, and began his railroad career in 1900, while still attending engineering school at Ohio State University, where he received his B. S. degree in civil engineering in 1902. After serving with the Baltimore & Ohio and as chief engineer of a mining operation in Mexico, he joined the M. P. in 1909 as assistant engineer in the maintenance of way department and held the positions consecutively of division engineer, general roadmaster, engineer, maintenance of way, district engineer, division superintendent and engineer, maintenance of way. Mr. Miller was promoted to chief engineer, maintenance of way, in 1938.

FRICTION SHOES ARE ACTUATED BY SEPARATE FRICTION SPRINGS
HEAVY, CAST-STEEL UPPER PLATE
FRICTION PLATE, WELDED IN PLACE
SOFT, LONG-TRAVEL SPRINGS
REINFORCED, CAST-STEEL LOWER MEMBER

Here's Low-Cost Help for Rough-Riding Freight Car Trucks

Why pay money for high maintenance and preventable lading damage when the economical A.S.F. Ride-Control Package can make your old trucks easy riding? You'll get long spring travel plus constant friction control—all in one self-contained unit—for smooth performance test-proved as "tops" throughout the package-group field. The Ride-Control Package has a definite place in your preparedness planning. Let us show you why and where it should be used.

A·S·F *Ride-Control*® PACKAGE

AMERICAN STEEL FOUNDRIES

HALLMARK OF FINE PRODUCTS

KINNEAR
ROLLING DOORS
Let Us Send You This
New Complete Data on
KINNEAR ROLLING DOORS
Your free copy of this brand new book brings you full, up-to-date details on all types of upward-acting doors for every need—including specifications on door sizes, headroom requirements, opening preparation, and so on. It shows you how and why the space-saving upward action of Kinnear Doors gives you highest efficiency at every opening.
In addition to the rugged, all-metal Kinnear Rolling Door—featuring the famous Kinnear-originated "curtain" of interlocking slats—it presents other Kinnear upward-acting doors. These include the sectional-type Kinnear RoL-TOP Doors (wood or all-metal), Kinnear Bi-Fold Doors (wood or all-metal), featuring two sections that "jacknife" upward and out of the way, and Kinnear Steel Rolling Fire Doors, the interlocking slat doors with special features for maximum fire safety. Kinnear Steel Rolling Grilles for protection that does not block light, air, vision, or sound are also shown. Write for this new Kinnear Catalog today!
KINNEAR
ROLLING DOORS
SAVING WAYS in DOORWAYS
The KINNEAR Mfg. Co.
Factories: 2020-40 Fields Avenue, Columbus 16, Ohio
1742 Yosemite Avenue, San Francisco 24, Calif.

Current Publications

FILM

Wheels of Progress, 16-mm. sound, color. Chicago, Rock Island & Pacific, 139 W. Van Buren st., Chicago 5. Free, on loan basis, to civic, traffic, fraternal clubs and other interested organizations.

Depicts the importance of railroad freight service to industry and agriculture and shows in detail the phases of Rock Island operations that contribute to that importance. Pictures taken by a special camera crew cover such highlights as "Rocket" freights, the road's new, multi-million dollar classification yards at Silvis, Ill., and Armourdale, Kan., and the more important industrial and agricultural centers along the 8,000-mi. system.

BOOK

Railroads Down the Valleys; Some Short Lines of the Oregon Country, by Randall V. Mills. 151 pages, illustrations, maps. Published by Pacific Books, Box 558, Palo Alto, Cal. $3.50.

Railroad history, social history, and folklore are here combined to present the complete stories of five short line railroads in the Pacific Northwest. Mr. Mills emphasizes the economic need which gave rise to each line, describes the changes which occurred in names, equipment, and use, and recounts some of the myths and legends that sprang up about the lines. He also presents brief biographies of the men who built and ran them. Following a brief introductory chapter on short lines in general, he relates the history of the Walla Walla & Columbia River (now a part of the Union Pacific), the Oregon Pacific (now a part of the Southern Pacific), the Portland Transit Company, the Oregon & Southeastern (now the Oregon, Pacific & Eastern), and the City of Prineville.

PERIODICAL ARTICLE

End of Railway Express?, Business Week, January 13, 1951, pp. 59-62. Published by McGraw-Hill Publishing Company, 330 W. 42nd st., New York 18. Single copies, 25 cents.

The Railway Express Agency's 25-year contract with its owner railroads runs out in three years. There's strong pressure now for calling it quits. Other roads want to keep it in operation—but with big changes.

PAMPHLETS

A Book That Gathers No Dust, by Harold H. Baetjer. 12 pages. Reprinted and distributed by the National Railway Publication Company, 424 W. 33rd st., New York 1.

A brief history of the Official Guide and the men who have made it the valuable reference tool it is today. Compilation, production and distribution are also touched upon.

Books for the Advertising and Marketing Man; A Classified Bibliography on Ad-

(Continued on page 110)

Perfect Form is what it
takes to lead the league
in any competition.
Passengers come in all sizes
and shapes and Karpen Seating
has been providing relaxed
comfort to keep them in

perfect form

SEAT A-4081-2

S. KARPEN & BROS. TRANSPORTATION SEATING • *George B. Cross Company* Exclusive Sales Agents
624 South Michigan Avenue, Chicago • One Park Avenue, New York

KARPEN SEATING . . . POINT OF CONTACT BETWEEN THE COMPANY AND ITS PASSENGERS

Freight Operating Statistics of Large Steam Railways — Selected

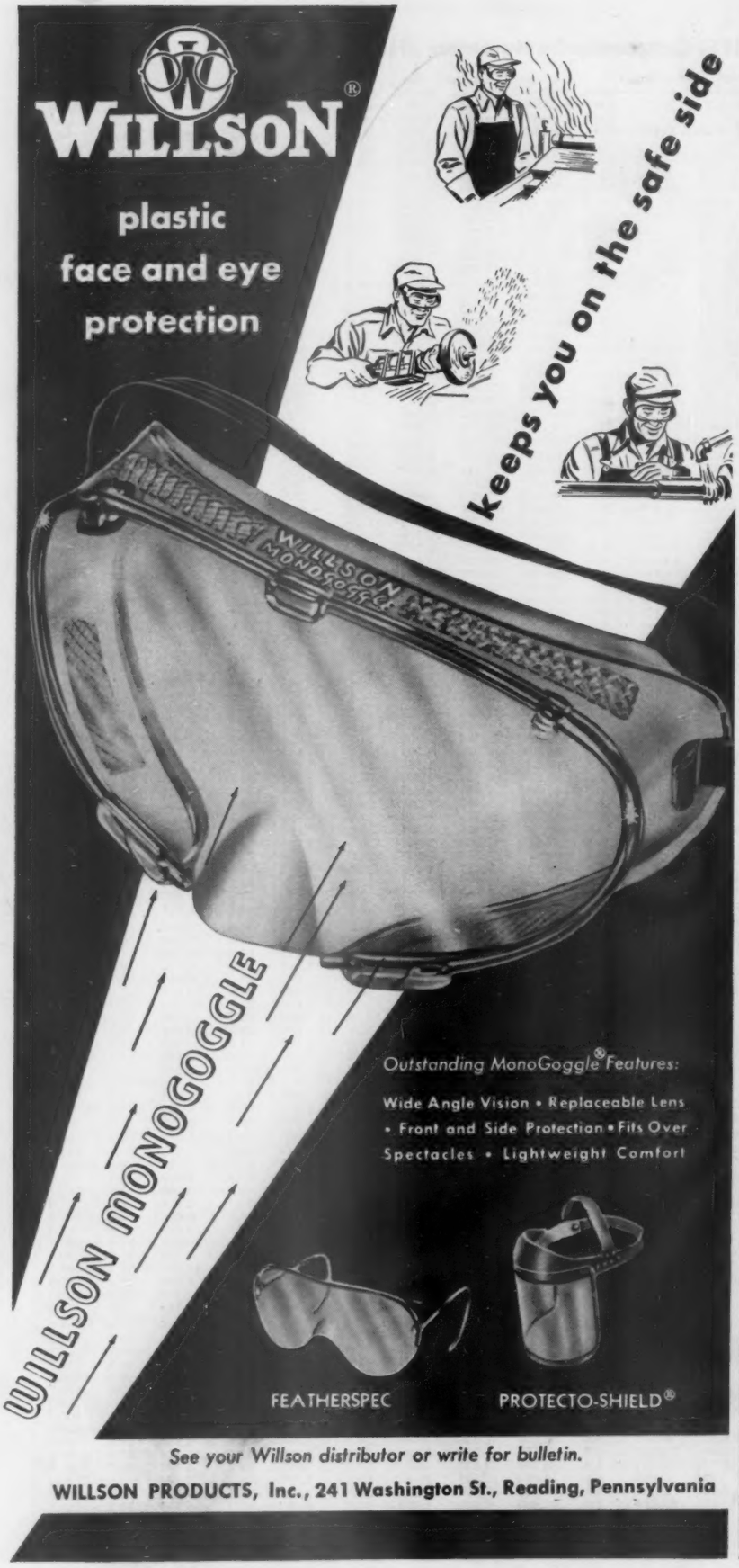
	Region, Road and Year	Miles of road operated	Train-miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-Miles (thousands): Gross excl.locos. & tenders	Ton-Miles (thousands): Net rev. and non-rev.	Road-locos. on lines: Serviceable: Unstored	Road-locos. on lines: Serviceable: Stored	Road-locos. on lines: B.O.	Road-locos. on lines: Per Cent B.O.
New Eng. Region	Boston & Maine 1950	1,700	271,328	278,231	12,062	10,491	70.4	641,654	272,483	84	9	10	9.7
	1949	1,701	274,174	282,900	13,394	10,202	65.5	658,641	268,817	92	5	19	16.4
	N. Y., N. H. & Htfd. 1950	1,766	295,276	295,980	28,213	11,733	69.7	730,364	319,984	99	..	9	8.3
	1949	1,773	264,459	265,600	19,083	10,914	68.5	665,793	295,666	107	10	16	12.0
Great Lakes Region	Delaware & Hudson 1950	793	250,559	294,590	21,700	10,622	71.3	769,497	428,579	156	30	34	15.5
	1949	794	211,865	257,151	28,315	9,540	68.2	649,664	332,236	120	54	24	12.1
	Del., Lack. & Western 1950	966	290,278	317,070	32,422	12,606	69.0	828,878	376,279	84	1	42	33.1
	1949	966	243,302	268,840	27,877	11,288	67.8	741,209	331,390	79	20	35	26.1
	Erie 1950	2,228	662,224	678,965	44,288	34,634	68.7	2,176,359	910,021	199	9	25	10.7
	1949	2,231	550,998	569,102	39,581	29,807	67.0	1,882,522	765,899	169	45	55	20.4
	Grand Trunk Western 1950	974	271,046	277,434	2,684	9,353	64.3	636,557	275,802	56	..	16	22.2
	1949	971	214,798	219,890	2,020	6,955	64.5	454,388	184,168	55	..	11	16.7
	Lehigh Valley 1950	1,227	243,805	256,346	22,291	12,326	73.9	799,618	392,388	50	4	21	28.0
	1949	1,239	221,443	232,201	23,346	10,971	66.9	750,058	349,079	48	10	29	33.3
	New York Central 1950	10,691	3,166,270	3,316,364	186,865	110,390	62.3	8,084,767	3,574,512	1,030	23	360	25.5
	1949	10,680	2,744,546	2,898,559	172,096	98,597	62.8	6,828,975	3,092,894	964	122	406	27.2
	NewYork, Chic. & St. L. 1950	2,162	780,218	796,476	12,550	29,275	66.9	1,995,879	907,174	204	6	34	13.9
	1949	2,162	635,843	670,818	6,963	24,476	66.0	1,662,961	741,240	179	30	60	22.3
	Pitts. & Lake Erie 1950	221	78,215	80,730	345	3,402	70.4	280,003	173,668	28	..	17	37.8
	1949	221	53,287	53,783	....	2,229	69.5	187,984	115,163	20	5	21	45.7
	Wabash 1950	2,381	553,497	559,235	9,642	22,544	71.9	1,402,199	614,331	140	9	70	32.0
	1949	2,381	567,588	578,324	9,197	20,242	68.2	1,290,419	538,684	142	14	55	26.1
Central Eastern Region	Baltimore & Ohio 1950	6,086	1,814,777	2,144,229	221,671	64,814	64.2	4,876,656	2,423,426	694	34	215	22.8
	1949	6,086	1,501,397	1,817,826	202,796	54,077	62.7	4,015,872	1,933,789	673	105	291	27.2
	Central of New Jersey 1950	410	72,534	72,534	4,416	2,657	67.1	195,265	101,713	40	..	5	11.1
	1949	411	62,399	62,399	4,824	2,158	64.2	168,980	86,551	32	4	8	18.2
	Central of Pennsylvania 1950	210	69,369	75,447	11,479	2,625	72.7	187,252	103,434	39	..	16	29.1
	1949	212	58,635	64,936	9,908	2,285	65.8	169,544	89,040	32	4	17	32.1
	Chicago & Eastern Ill. 1950	886	127,273	127,273	2,627	5,203	68.0	344,809	165,894	25	..	2	7.4
	1949	909	117,578	117,836	2,628	4,220	70.3	268,487	129,480	40	3	2	4.4
	Elgin, Joliet & Eastern 1950	238	94,832	97,443	616	3,767	67.1	294,427	162,765	41	..	..	..
	1949	238	60,807	61,340	....	2,172	68.3	159,753	85,460	37	..	3	7.5
	Pennsylvania System 1950	10,009	3,057,010	3,353,744	345,128	130,485	68.5	8,943,165	4,424,106	1,224	..	344	21.9
	1949	10,039	2,507,320	2,747,070	311,385	106,663	66.6	7,376,658	3,547,846	1,229	112	466	25.8
	Reading 1950	1,315	375,921	388,157	25,183	14,446	67.1	1,121,068	622,191	178	16	30	13.4
	1949	1,320	338,737	354,569	33,843	12,201	69.7	911,681	507,140	167	24	62	24.5
	Western Maryland 1950	837	182,828	219,001	26,928	6,594	63.4	539,588	300,511	140	20	17	9.6
	1949	836	160,795	196,803	25,858	5,560	64.3	452,954	253,037	127	38	14	7.8
Pocahontas Region	Chesapeake & Ohio 1950	5,042	1,451,031	1,519,365	60,702	60,241	57.4	5,100,475	2,781,777	521	3	183	25.9
	1949	5,046	1,292,733	1,381,837	57,002	52,446	60.4	4,363,735	2,436,132	548	35	161	21.6
	Norfolk & Western 1950	2,104	674,317	708,456	45,621	31,016	59.5	2,668,714	1,432,315	244	19	25	8.7
	1949	2,107	627,107	667,266	47,098	28,081	60.4	2,410,858	1,322,931	264	26	45	13.4
Southern Region	Atlantic Coast Line 1950	5,480	776,063	800,403	13,699	24,790	65.8	1,697,588	798,864	338	3	103	23.2
	1949	5,507	758,644	766,712	14,394	20,637	62.5	1,425,778	643,789	316	41	81	18.5
	Central of Georgia 1950	1,783	297,214	300,999	5,032	8,173	72.2	529,089	255,959	104	2	8	7.0
	1949	1,783	255,417	257,692	4,531	6,797	70.2	436,058	201,071	94	4	15	13.3
	Gulf, Mobile & Ohio 1950	2,851	329,161	329,161	66	16,625	74.7	1,054,563	510,840	81	..	2	2.4
	1949	2,854	314,869	314,869	224	14,125	70.8	917,161	427,730	68	23	5	5.2
	Illinois Central 1950	6,540	1,583,840	1,589,028	55,964	55,893	63.6	4,051,174	1,894,045	578	1	77	11.7
	1949	6,542	1,408,326	1,412,163	49,351	49,214	63.5	3,468,703	1,640,629	549	8	93	14.3
	Louisville & Nashville 1950	4,769	1,117,318	1,186,896	33,789	35,359	64.5	2,574,778	1,310,503	315	14	96	22.6
	1949	4,774	1,122,965	1,202,399	31,378	30,619	65.6	2,167,442	1,125,598	365	36	65	13.9
	Nash., Chatt. & St. Louis 1950	1,049	215,415	218,762	3,829	6,527	74.1	414,563	199,224	74	..	19	20.4
	1949	1,049	191,247	193,805	3,018	5,637	72.9	353,927	163,202	58	..	3	4.9
	Seaboard Air Line 1950	4,136	732,157	764,982	3,971	24,542	67.2	1,700,461	800,097	232	11	46	15.9
	1949	4,139	690,335	714,674	5,837	21,144	63.2	1,467,307	654,974	221	31	77	23.4
	Southern 1950	6,320	1,274,385	1,283,490	14,038	42,686	71.0	2,681,932	1,231,049	389	14	160	28.4
	1949	6,165	1,152,377	1,160,225	11,995	36,902	68.0	2,351,525	1,037,916	382	73	171	27.3
Northwestern Region	Chicago & North Western 1950	7,921	949,036	965,392	27,751	33,584	65.6	2,366,525	1,057,896	295	3	122	29.0
	1949	8,073	869,485	882,754	22,945	27,834	63.0	1,962,154	835,020	273	29	169	35.9
	Chicago Great Western 1950	1,441	161,112	161,112	7,856	9,216	68.4	612,073	273,287	33	..	2	5.7
	1949	1,445	159,236	159,490	9,207	8,667	67.3	548,133	225,123	40	..	8	16.7
	Chic., Milw., St. P. & Pac. 1950	10,664	1,306,040	1,358,160	52,674	49,479	65.9	3,363,177	1,545,134	449	39	94	16.2
	1949	10,663	1,295,505	1,348,550	49,604	44,291	61.3	3,093,224	1,341,216	425	73	90	15.3
	Chic., St. P., Minn. & Omaha 1950	1,606	208,306	216,300	10,787	5,839	68.7	396,397	178,904	70	1	26	26.8
	1949	1,606	206,066	216,126	11,155	5,592	64.4	393,556	175,144	74	..	31	29.5
	Duluth, Missabe & Iron Range 1950	560	136,297	137,091	1,289	5,915	50.2	554,115	311,052	63	..	2	3.1
	1949	574	23,885	23,954	404	321	49.1	24,264	10,138	29	10	22	36.1
	Great Northern 1950	8,220	1,249,477	1,249,018	53,285	48,782	64.2	3,559,356	1,672,832	384	60	56	11.2
	1949	8,222	1,106,668	1,105,717	49,936	39,739	58.8	2,908,082	1,244,675	334	77	67	14.0
	Minneap., St. P. & S. St. M. 1950	4,179	440,290	449,564	6,577	14,753	66.6	993,415	474,138	121	..	15	11.0
	1949	4,179	381,902	387,470	3,648	12,424	65.2	811,005	364,096	108	2	14	11.3
	Northern Pacific 1950	6,608	881,289	916,535	43,651	33,777	66.3	2,374,805	1,094,760	339	7	67	16.2
	1949	6,594	866,531	909,853	49,971	31,036	60.8	2,272,195	988,092	292	37	66	16.7
Central Western Region	Atch., Top. & S. Fe (incl. 1950	13,074	2,717,956	2,869,294	108,670	110,883	66.4	7,371,748	2,883,852	634	31	187	21.9
	G. C. & S. F. and P. & S. F.) 1949	13,102	2,360,870	2,495,497	91,415	92,608	66.3	6,129,559	2,394,011	640	131	126	14.0
	Chic., Burl. & Quincy 1950	8,796	1,263,251	1,291,280	47,139	52,553	65.3	3,586,995	1,614,221	393	16	154	27.4
	1949	8,839	1,239,205	1,277,169	44,383	46,588	62.7	3,203,428	1,379,578	415	19	142	24.7
	Chic., Rock I. & Pac. 1950	7,579	1,072,059	1,098,661	18,776	37,194	64.0	2,568,335	1,161,673	239	76	38	10.8
	1949	7,597	1,045,604	1,080,759	17,734	35,172	61.7	2,432,506	1,051,347	235	25	97	27.2
	Denver & R. G. Wn. 1950	2,400	370,293	404,849	46,966	14,427	70.1	982,775	481,128	122	25	32	17.9
	1949	2,413	373,073	403,873	47,035	13,531	73.6	904,279	439,737	129	18	49	25.0
	Southern Pacific 1950	8,069	2,080,618	2,217,177	308,873	91,775	68.5	5,964,947	2,514,193	767	3	145	15.8
	1949	8,067	1,939,243	2,093,008	327,743	81,609	64.6	5,490,225	2,228,437	735	4	208	22.0
	Union Pacific 1950	9,720	2,679,316	2,777,031	190,579	107,868	66.8	7,191,488	3,119,257	654	20	121	15.2
	1949	9,721	2,436,144	2,520,269	157,475	95,791	62.0	6,670,987	2,689,607	578	81	153	18.8
	Western Pacific 1950	1,192	248,226	256,905	19,776	11,606	73.0	739,715	331,363	59	6	24	27.0
	1949	1,192	200,146	223,315	20,462	9,606	77.1	587,757	269,929	64	8	44	37.9
Southwestern Region	International-Gt. Northern* 1950	1,089	191,850	191,908	1,071	6,420	67.2	458,906	208,103	52	5	7	10.9
	1949	1,110	174,743	175,008	374	5,940	66.1	416,790	190,599	61	7	5	6.8
	Kansas City Southern 1950	886	177,702	178,275	1,145	9,378	68.6	631,660	294,151	33	6	21	35.0
	1949	886	173,793	174,113	962	7,777	63.7	547,321	246,194	40	7	8	14.5
	Mo.-Kans.-Texas Lines 1950	3,231	445,268	448,525	5,599	15,856	68.1	1,018,328	451,158	90	4	39	29.3
	1949	3,241	408,604	417,096	7,133	13,997	65.1	904,363	391,281	93	1	52	35.6
	Missouri Pacific* 1950	6,942	1,340,727	1,363,551	23,714	48,632	66.9	3,328,227	1,517,505	368	..	48	11.5
	1949	6,986	1,247,935	1,268,275	21,027	42,807	67.1	2,845,341	1,292,773	367	11	73	16.2
	Texas & Pacific 1950	1,844	376,230	376,230	13,422	13,859	62.7	965,012	376,951	88	..	4	4.3
	1949	1,852	324,566	324,566	9,458	11,779	64.7	786,548	309,404	119	..	4	3.3
	St. Louis-San Francisco 1950	4,604	701,508	710,516	7,909	24,350	68.1	1,591,183	714,233	218	62	61	17.9
	1949	4,615	697,145	705,157	7,815	22,486	65.5	1,508,597	678,267	200	69	52	16.2
	St. Louis Southw. Lines 1950	1,562	361,454	362,928	5,127	14,725	72.5	857,252	383,203	79	7	19	18.1
	1949	1,562	326,673	327,352	4,384	12,057	71.5	747,063	333,948	76	20	10	9.4
	Texas & New Orleans 1950	4,314	810,075	810,075	21,882	28,249	68.5	1,893,198	847,615	225	..	46	17.0
	1949	4,314	830,968	831,044	17,531	24,923	63.9	1,721,380	728,992	214	..	59	21.6

Items for the Month of November 1950 Compared with November 1949

	Region, Road and Year	Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos. and tenders	G.t.m.per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine	1950 1,481	8,637	10,118	3.5	36,809	2,368	1,006	26.0	833	45.5	5,343	15.6	101.6
		1949 2,347	9,106	11,453	3.1	37,731	2,406	982	26.3	766	44.4	5,268	15.7	93.1
	N. Y., N. H. & Htfd.	1950 1,565	17,549	19,114	1.2	36,142	2,476	1,085	27.3	550	28.9	6,040	14.6	115.4
		1949 2,071	17,984	20,055	2.4	36,133	2,524	1,121	27.1	512	27.6	5,559	14.4	79.5
Great Lakes Region	Delaware & Hudson	1950 2,264	6,210	8,474	5.3	58,295	3,084	1,718	40.3	1,592	55.3	18,015	19.0	51.7
		1949 4,535	5,942	10,477	5.0	51,973	3,081	1,576	34.8	1,109	46.7	13,948	16.9	51.3
	Del., Lack. & Western	1950 4,943	11,101	16,044	9.3	45,119	2,903	1,318	29.8	759	36.9	12,984	15.8	99.3
		1949 6,821	9,773	16,594	9.2	45,448	3,102	1,387	29.4	685	34.4	11,435	14.9	77.7
	Erie	1950 6,973	22,764	29,737	3.5	56,492	3,315	1,386	26.3	1,006	55.7	13,615	17.2	113.4
		1949 10,740	18,023	28,763	7.6	56,431	3,440	1,399	25.7	923	53.6	11,443	16.5	84.0
	Grand Trunk Western	1950 3,815	10,775	14,590	5.2	45,875	2,371	1,027	29.5	615	32.4	9,439	19.5	142.4
		1949 4,757	8,540	13,297	8.9	43,482	2,132	864	26.5	482	28.2	6,322	20.6	123.7
	Lehigh Valley	1950 4,916	11,421	16,337	6.2	63,442	3,342	1,640	31.8	787	33.4	10,660	19.3	126.5
		1949 7,467	10,534	18,001	10.3	62,856	3,434	1,598	31.8	651	30.6	9,391	18.6	98.0
	New York Central	1950 50,147	130,668	180,815	4.8	40,001	2,591	1,145	32.4	665	33.0	11,145	15.7	93.1
		1949 67,329	99,350	166,679	8.7	41,690	2,539	1,150	31.4	663	33.6	9,653	16.8	77.1
	NewYork, Chic. & St. L.	1950 4,752	20,752	25,504	3.4	44,109	2,611	1,187	31.0	1,156	55.8	13,987	17.2	120.3
		1949 7,932	14,159	22,091	3.9	44,833	2,655	1,184	30.3	1,090	54.5	11,428	17.1	88.8
	Pitts. & Lake Erie	1950 4,127	11,048	15,175	13.4	49,296	3,604	2,235	51.0	369	10.3	26,194	13.8	66.0
		1949 4,875	8,256	13,131	13.6	51,545	3,540	2,169	51.7	270	7.5	17,370	14.6	42.1
	Wabash	1950 6,599	12,956	19,555	2.5	53,186	2,561	1,122	27.3	1,006	51.4	8,600	21.0	91.1
		1949 7,093	12,551	19,644	2.9	47,864	2,304	962	26.6	880	48.5	7,541	21.1	97.9
Central Eastern Region	Baltimore & Ohio	1950 40,225	55,995	96,220	7.2	35,751	2,739	1,361	37.4	855	35.6	13,273	13.3	86.6
		1949 48,698	39,039	87,737	14.0	35,869	2,740	1,320	35.8	731	32.6	10,591	13.4	65.1
	Central of New Jersey	1950 445	9,388	9,833	3.4	36,013	2,811	1,464	38.3	350	13.6	8,269	13.4	88.7
		1949 1,070	8,883	9,953	8.2	36,871	2,798	1,433	40.1	302	11.7	7,020	13.6	76.2
	Central of Pennsylvania	1950 916	3,664	4,580	15.5	40,680	2,879	1,590	39.4	736	25.7	16,418	15.1	65.0
		1949 1,605	3,423	5,028	16.7	41,832	3,071	1,613	39.0	546	21.3	14,000	14.5	60.6
	Chicago & Eastern Ill.	1950 1,992	3,906	5,898	6.2	45,067	2,716	1,307	31.9	925	42.7	6,241	16.6	165.1
		1949 2,124	3,520	5,644	7.7	37,269	2,294	1,106	30.7	697	32.3	4,748	16.3	93.0
	Elgin, Joliet & Eastern	1950 5,554	14,830	20,384	1.6	19,148	3,225	1,783	43.2	276	9.5	22,796	6.2	125.0
		1949 7,014	7,825	14,839	2.0	19,779	2,719	1,454	39.3	197	7.3	11,969	7.5	75.8
	Pennsylvania System	1950 89,159	125,671	214,830	12.6	43,051	3,029	1,498	33.9	687	29.6	14,734	14.7	85.6
		1949 133,645	102,809	236,454	15.4	43,862	3,040	1,462	33.3	509	23.0	11,780	14.9	61.5
	Reading	1950 8,946	21,178	30,124	5.3	37,007	2,984	1,656	43.1	677	23.4	15,772	12.4	72.7
		1949 16,202	17,933	34,135	9.2	33,389	2,694	1,499	41.6	514	17.7	12,807	12.4	60.2
	Western Maryland	1950 4,382	3,478	7,860	2.3	40,662	3,002	1,672	45.6	1,224	42.4	11,968	13.8	50.0
		1949 5,051	3,293	8,344	1.6	38,253	2,899	1,620	45.5	939	32.1	10,089	13.6	44.3
Pocahontas Region	Chesapeake & Ohio	1950 43,971	24,259	68,230	5.6	57,396	3,553	1,938	46.2	1,299	49.0	18,391	16.3	80.6
		1949 51,309	24,970	76,279	7.9	55,467	3,420	1,910	46.5	1,008	36.0	16,093	16.4	70.2
	Norfolk & Western	1950 29,118	7,902	37,020	3.3	64,767	4,008	2,151	46.2	1,344	48.9	22,692	16.4	94.3
		1949 29,409	7,352	36,761	5.5	61,431	3,939	2,161	47.1	979	34.4	20,929	16.0	75.3
Southern Region	Atlantic Coast Line	1950 10,747	19,728	30,475	2.8	32,339	2,204	1,037	32.2	881	41.5	4,859	14.8	68.1
		1949 13,087	15,794	28,881	5.3	29,870	1,886	852	31.2	747	38.3	3,897	15.9	64.6
	Central of Georgia	1950 1,630	6,229	7,859	3.8	30,502	1,795	869	31.3	1,034	45.7	4,785	17.1	97.1
		1949 3,239	5,032	8,271	7.9	30,036	1,711	789	29.6	826	39.8	3,759	17.6	84.6
	Gulf, Mobile & Ohio	1950 2,928	11,865	14,793	2.3	62,341	3,210	1,555	30.7	1,110	48.4	5,973	19.5	141.5
		1949 4,116	11,100	15,216	2.7	56,889	2,920	1,362	30.3	956	44.6	4,996	19.5	115.8
	Illinois Central	1950 18,609	34,542	53,151	1.9	44,307	2,585	1,209	33.9	1,195	55.5	9,654	17.3	89.4
		1949 21,112	29,630	50,742	2.2	43,105	2,496	1,181	33.3	1,055	49.9	8,359	17.5	80.0
	Louisville & Nashville	1950 31,810	15,801	47,611	7.9	35,508	2,312	1,177	37.1	936	39.1	9,160	15.4	102.1
		1949 35,053	12,837	47,890	10.8	29,781	1,937	1,006	36.8	694	28.8	7,859	15.4	92.7
	Nash., Chatt. & St. Louis	1950 1,022	4,749	5,771	2.8	38,528	1,928	927	30.5	1,149	50.8	6,330	20.0	86.3
		1949 3,038	4,306	7,344	10.4	36,423	1,859	857	29.0	754	35.7	5,186	19.7	116.1
	Seaboard Air Line	1950 8,285	15,566	23,851	1.8	40,739	2,377	1,119	32.6	1,114	50.8	6,448	17.5	104.3
		1949 10,135	13,734	23,869	3.2	37,656	2,177	972	31.0	914	46.7	5,275	17.7	82.4
	Southern	1950 12,340	28,309	40,649	3.6	35,501	2,125	976	28.8	1,013	49.5	6,493	16.9	81.4
		1949 17,051	28,210	45,261	5.5	35,220	2,060	909	28.1	779	40.8	5,612	17.3	64.3
Northwestern Region	Chicago & North Western	1950 17,799	33,851	51,650	3.4	39,884	2,615	1,169	31.5	653	31.6	4,452	16.0	87.0
		1949 20,539	31,714	52,253	3.2	36,564	2,377	1,012	30.0	524	27.8	3,448	16.2	70.8
	Chicago Great Western	1950 1,214	5,642	6,856	2.5	66,857	3,835	1,712	29.7	1,226	60.4	6,322	17.6	169.2
		1949 1,345	5,164	6,509	4.2	62,737	3,456	1,419	26.0	1,083	62.0	5,193	18.2	124.9
	Chic., Milw., St. P. & Pac.	1950 24,199	37,203	61,402	2.3	41,348	2,592	1,191	31.2	792	38.5	4,830	16.1	87.5
		1949 31,766	31,401	63,167	2.4	38,828	2,410	1,045	30.3	702	37.8	4,193	16.3	85.5
	Chic., St. P., Minn. & Omaha	1950 1,156	8,411	9,567	2.6	26,508	1,997	901	30.6	604	28.7	3,713	13.9	83.6
		1949 834	7,919	8,753	3.5	25,094	1,968	876	31.3	680	33.7	3,635	13.1	78.1
	Duluth, Missabe & Iron Range	1950 13,942	628	14,570	3.2	69,464	4,276	2,400	52.6	695	26.3	18,515	17.1	90.7
		1949 14,673	413	15,086	3.2	15,776	1,064	445	31.6	23	1.5	589	15.5	15.8
	Great Northern	1950 22,564	23,164	45,728	3.1	45,184	2,895	1,361	34.3	1,194	54.3	6,784	15.9	93.4
		1949 24,670	20,936	45,606	2.9	44,388	2,653	1,136	31.3	926	50.2	5,046	16.9	86.9
	Minneap., St. P. & S. St. M.	1950 5,963	9,845	15,808	4.7	41,468	2,282	1,089	32.1	982	45.9	3,782	18.4	122.3
		1949 6,520	7,080	13,600	6.0	39,908	2,148	964	29.3	850	44.5	2,904	18.8	116.7
	Northern Pacific	1950 17,952	16,212	34,164	4.7	44,895	2,722	1,255	32.4	1,043	48.6	5,522	16.7	84.4
		1949 20,854	16,001	36,855	5.9	46,211	2,631	1,144	31.8	958	49.5	4,995	17.6	87.1
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1950 43,415	35,539	78,954	3.8	54,886	2,729	1,068	26.0	1,251	72.4	7,353	20.2	124.4
		1949 48,723	30,364	79,087	4.4	51,991	2,612	1,020	25.9	1,014	59.2	6,091	20.0	102.5
	Chic., Burl. & Quincy	1950 15,313	29,003	44,316	2.7	52,189	2,847	1,281	30.7	1,208	60.2	6,117	18.4	84.4
		1949 18,017	26,550	44,567	4.1	47,111	2,595	1,118	29.6	992	53.4	5,203	18.2	81.7
	Chic., Rock I. & Pac.	1950 9,142	25,340	34,482	2.6	44,324	2,406	1,088	31.2	1,126	56.3	5,109	18.5	113.2
		1949 10,850	22,085	32,935	3.7	42,335	2,333	1,008	29.9	993	53.9	4,613	18.2	107.3
	Denver & R. G. Wn.	1950 7,664	6,941	14,605	3.4	43,516	2,672	1,308	33.3	1,090	46.6	6,682	16.4	92.0
		1949 8,002	7,386	15,388	4.4	41,874	2,436	1,185	32.5	922	38.5	6,075	17.3	83.0
	Southern Pacific	1950 24,089	45,443	69,532	2.3	47,128	2,908	1,226	27.4	1,235	65.8	10,386	16.4	98.7
		1949 25,494	41,809	67,303	3.8	46,734	2,861	1,161	27.3	1,124	63.8	9,208	16.5	90.1
	Union Pacific	1950 25,840	36,883	62,723	2.5	58,286	2,716	1,178	28.9	1,624	84.1	10,697	21.7	129.5
		1949 27,067	32,787	59,854	4.0	60,363	2,782	1,122	28.1	1,408	80.9	9,223	22.0	112.9
	Western Pacific	1950 1,694	4,089	5,783	7.8	64,939	3,000	1,344	28.6	1,919	92.0	9,266	21.8	107.0
		1949 2,113	3,721	5,834	10.6	61,921	2,952	1,356	28.1	1,592	73.5	7,548	21.1	71.2
Southwestern Region	International-Gt. Northern*	1950 662	6,782	7,444	1.5	46,618	2,410	1,093	32.4	911	41.8	6,370	19.5	106.8
		1949 701	7,066	7,767	1.5	45,756	2,402	1,099	32.1	834	39.4	5,724	19.2	84.2
	Kansas City Southern	1950 1,084	6,431	7,515	2.4	68,214	3,587	1,671	31.4	1,345	62.5	11,067	19.2	110.8
		1949 1,546	5,778	7,324	5.2	59,621	3,168	1,425	31.7	1,096	54.4	9,262	18.9	117.5
	Mo.-Kans.-Texas Lines	1950 2,418	8,543	10,961	3.4	43,773	2,298	1,018	28.5	1,333	68.8	4,654	19.1	120.8
		1949 3,246	8,983	12,229	3.0	40,864	2,220	961	28.0	1,078	59.3	4,024	18.5	100.7
	Missouri Pacific*	1950 15,159	20,623	35,782	2.2	49,382	2,505	1,142	31.2	1,436	68.8	7,287	19.9	118.7
		1949 18,800	19,403	38,203	2.3	44,123	2,289	1,040	30.2	1,174	58.0	6,168	19.4	100.4
	Texas & Pacific	1950 2,370	7,301	9,671	6.0	49,753	2,570	1,004	27.2	1,255	73.6	6,814	19.4	150.6
		1949 2,286	6,533	8,819	4.7	46,796	2,430	956	26.3	1,156	68.0	5,569	19.3	99.7
	St. Louis-San Francisco	1950 6,924	13,961	20,885	3.0	39,177	2,279	1,023	29.3	1,155	57.9	5,171	17.3	79.1
		1949 8,876	13,288	22,164	3.1	36,104	2,173	977	30.2	953	48.3	4,899	16.7	81.8
	St. Louis Southw. Lines	1950 1,364	4,894	6,258	1.8	44,054	2,375	1,062	26.0	1,888	100.1	8,178	18.6	126.2
		1949 1,675	4,785	6,460	1.4	43,208	2,290	1,024	27.7	1,574	79.5	7,127	18.9	110.3
	Texas & New Orleans	1950 3,309	19,010	22,319	2.8	42,435	2,359	1,056	30.0	1,289	62.7	6,549	18.2	109.5
		1949 4,512	18,328	22,840	3.7	39,483	2,090	885	29.2	1,059	56.7	5,633	19.1	111.0

* Report of trustee or trustees.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.



(Continued from page 106)

vertising, Marketing, Selling, and Related Subjects. Revised edition, 38 pages. Published by the Bureau of Research & Education, Advertising Federation of America, 330 W. 42nd st., New York 18. $1.

A fairly complete bibliography of books on advertising, marketing, and immediately related subjects, published during the 20-year period 1931-1950, inclusive. A few older books of unique value are included. The 1,488 books are listed by author, under 57 subject classifications, which are arranged alphabetically. An index to the subject classifications is given; also an author index and a list of publishers.

Research for Industry. 56 pages. Published by the Armour Research Foundation of Illinois Institute of Technology, Technology Center, Chicago 16. Free.

Scientific progress on more than 150 widely varied research projects is described in this annual report covering the fiscal year 1949-1950, in which Armour's staff of almost 700 persons undertook a total of 337 projects, representing an investment of $4,614,958. Two studies for the Pullman-Standard Car Manufacturing Company are reported on—dynamic and fatigue tests of railway cars and quieting of sleeping car ventilation systems—as well as one for the Association of American Railroads on corrosion prevention.

A Chronology of American Railroads, including Mileage by States and by Years. 9 pages. Published by the Association of American Railroads, Transportation bldg., Washington 6, D. C. Free.

Beginning in 1807, chronological data on the history and development of American railroads are listed. Growth of railway mileage by states, by decades, from 1830 through 1949 is shown, as is total railway mileage by years from 1830 through 1949; trackage is shown from 1876 through 1949.

The Making of Steel. 96 pages, illustrations. Published by the American Iron & Steel Institute, 350 Fifth ave., New York 1.

The principal steps in the making of steel are outlined in this booklet. It tells how raw materials are procured over long assembly routes that cover many states and extend into other continents; describes the making of raw steel, and tells how finished products are rolled. One chapter is devoted to manufacture of rails.

The Highway-Rail Intersection Program, 1950. 14 pages, illustrations. Published by the National Safety Council, 425 North Michigan ave., Chicago 11. Free.

This is the report of C. M. Kimball, chairman of the Highway-Railroad Crossing Committee, Railroad Section, National Safety Council, delivered at the 38th National Safety Congress. It reviews the program carried on in 1950 and makes recommendations for its continuance. An important part in this program is played by the N.S.C. "Signs of Life" project, which is designed to impress motorists with the meaning and importance of highway signs, signals and pavement markings —including those at highway-railroad crossings.

LONGER LIFE

Unbreakable Plastic!

GITS No. 122
Prefocused Right-Angle
FLASHLIGHT

No. 100 "Plastic Eye" Straight, Two-cell Flashlight.

Surpasses railroad standards for safety, efficiency, and economy. Leading roads and public utilities use it. Shockproof and non-conductive. Lessens battery drainage. Reliable in rain and snow, in any temperature. All working parts brass. Will not rust or corrode. Extra bulb and belt clip.

Send for samples and prices. Write direct or to distributor.

CASE: Black Ethyl Cellulose Plastic.
SWITCH: "On", "Off", and Signaling.
CURRENT: Standard two-cell D batteries.
BULB: Standard 2-4 volt prefocused.
REFLECTOR: Brass, nickel-plated, lacquered parabolic type.

GITS *Molding Corporation*
4663 West Huron St., Chicago 44, Illinois

Canadian Distributors
MYER BALD, LTD. 69 York Street, Toronto

McDOUGALL-BUTLER SINCE 1887

SPECIALIZED RAILROAD FINISHES

HARDCOTE TRANSPORTATION FINISHES
For Passenger Cars and Signal Equipment
CHEMICAL RESISTANT COATINGS
Alkali Resistant For Tank Cars & Covered Hopper Cars
BUTLER FRONT END PAINT
Beats the Heat! Won't Crack, Blister or Peel.
Send for literature and color card.

McDOUGALL-BUTLER CO., INC.
General Offices, Buffalo 14, New York

We share the **TAXES**

UNION PACIFIC RAILROAD

● Communities served by Union Pacific receive millions of dollars in taxes from the railroad and its employees every year. Payrolls, too, build local prosperity. No community we serve is too small to receive some share.

Be Specific—Ship **UNION PACIFIC**

PUNCH-LOK CLAMPS are Your Best Bet

LOOK! It's punch-locked for safety

Here are some suggestions . . .

The Punch-Lok Method is now the standard practice for all shop-hose clamping by the nation's leading railroads. Many railroads have assigned standard stockbook reference numbers to Punch-Lok clamps, fittings and tools.

Diesel locomotive builders use Punch-Lok clamps on original equipment. Railroad Diesel repair shops find Punch-Lok clamps the solution on overhaul repair work on pneumatic control hose for panel, starter, and shutters.

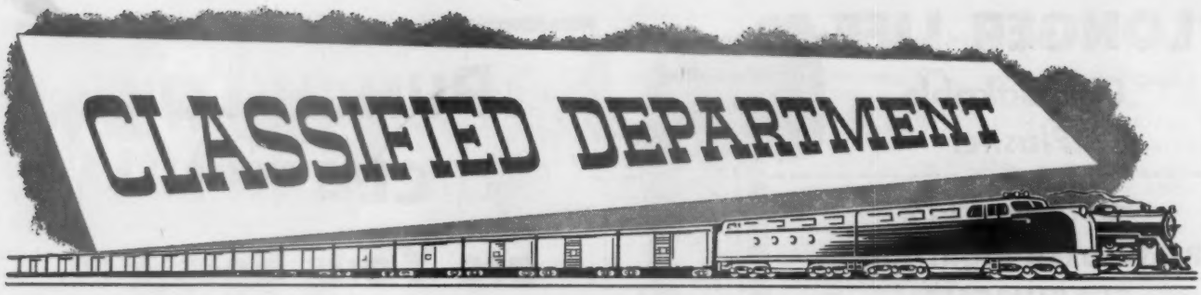
The use of Punch-Lok clamps is permitted by A.A.R. for train line hose on cars in interchange service.

Today Punch-Lok clamps are used extensively for holding the insulation on pressure lubricating lines, steam lines, etc. They make a better job and are easy to apply.

For dozens of miscellaneous service and repair jobs, both in the shops and on rolling stock—it's Punch-Lok clamps.

Write for full information

PUNCH-LOK COMPANY
Dept. K, 321 N. Justine Street Chicago 7, Ill.



RAILROAD EQUIPMENT—*FOR SALE*

STANDARD GAUGE FREIGHT CARS

Box, Single Sheathed, 40 & 50-Ton
Flats, 50 and 70-Ton
Gondolas, Composite, 50 & 70-Ton
Gondolas, Composite, 50-Ton, Low Side, Drop End
Hoppers, Covered, All-Steel, 50 & 70-Ton
Hoppers, Twin, All-Steel, 50-Ton, Cross Dump
Hoppers, Triple, All-Steel, 70-Ton, Cross Dump
Ore Hopper, All-Steel, 50-Ton, Center Dump
Stock, 40-Ton, Single Deck
Tank, 10,000-Gallon, Class III
Tank, 8,000-Gallon, Class II

EXTRA LONG FLAT CARS
40- & 50-Ton Capacity, Length 70' to 74'

STANDARD GAUGE DUMP CARS

End Dump, 10-Yd., 30-Ton, Lift Door
End Dump, 20-Yd., 50-Ton, Drop Door
Side Dump, 16-Yd., 40-Ton, Lift Door
Side Dump, 20-Yd., 40-Ton, Lift Door
Side Dump, 30-Yd., 50-Ton, Lift Door

STANDARD GAUGE LOCOMOTIVES
65-Ton Westinghouse Diesel Electric, 540 H.P.

Gasoline—10-Ton to 25-Ton
Diesel-Mechanical—8-Ton to 30-Ton
Gasoline-Electric—35-Ton
Propane-Electric—70-Ton

One 50-Ton, H. K. Porter, Type 0-4-0, Oil-Fired, Steam, Built 1942

PASSENGER EQUIPMENT
All types of Passenger & Baggage Equipment, including Self-Propelled!

4 ALL-STEEL DINING CARS, AIR-CONDITIONED

Send us your Inquiries
We Buy Freight Cars for Dismantling
Send us your offerings

REPAIR PARTS
For
All Types of
Freight Cars

IRON & STEEL PRODUCTS, INC.

GENERAL OFFICE
13486 S. Brainard Ave., Chicago 33, Illinois
Phone: BAyport 1-3456

NEW YORK OFFICE
50-c Church St., New York 7, N. Y.
Phone: BEekman 3-8230

"ANYTHING containing IRON or STEEL"

STORAGE TANKS
6,000 Gallon
8,000 Gallon
10,000 Gallon

MACHINERY WANTED

1 Railway Car Wheel Grinder for Mounted Wheels, 36-40" Diameter.
1 Railway Car Wheel Boring Mill, capacity 36-40" Diameter Wheels.
1 Center Drive Axle Lathe, with opposed burnishing arrangement, capacity 6" x 11".
1 Opposed Burnishing Arrangement, for application to existing equipment, capacity 6" x 11".
1 Burnishing Lathe, Equipped with Opposed Burnishing Arrangement, capacity 6" x 11".

Furnish full description, including price, condition, age, location. Address Box 584, RAILWAY AGE, 30 Church St., New York 7, N. Y.

NEW AND USED EQUIPMENT

Greenheart
Piles, Poles, Gang Sawn Lumber
Fire Resistant, Teredo and termite resistant. Treatment unnecessary. Double strength.
GREENHEART & WALLABA TIMBER CO., INC.
52 Vanderbilt Ave.
New York 17, N. Y.
Installation & Design—Information on Request

Looking For A Job?
Use the
Classified Dept.

SHORT LINE RAILROAD WANTED

Interested in purchase or lease — industrial trackage; short line (serving several towns); remainder of an interurban system.
Address Box 576, RAILWAY AGE, 30 Church St., New York 7, N. Y.

When using a box number in an advertisement add one dollar to cover the cost of ten words in address.

KEEP BONDS BUYING

Educational Services for RAILROAD MEN

Our New Service
on
Diesel Locomotive
Operation
is highly recommended
for
Engineers and Firemen

The Railway
Educational Bureau
Omaha 2, Nebraska

HYMAN-MICHAELS COMPANY

Relaying Rails ★★★ **Dismantling**

Used railroad equipment—cars—locomotives
Freight Car Replacement Parts
Complete stocks of guaranteed used freight car parts carried on hand by us at all times. Located conveniently for shipment to any part of the country. Write—Phone—Car or Track Dismantling, or Car Parts.

Main Office
122 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS

Branches
Wire—when interested in used Rails, Equipment, Cars,

St. Louis	Los Angeles	Havana, Cuba
New York	San Francisco	Houston
SERVICE	QUALITY	RELIABILITY

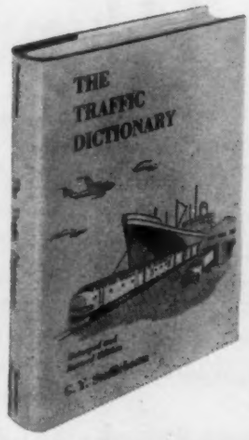
LOOKING FOR A JOB?

Use the "POSITION WANTED" column of the Classified Department to your advantage.

Write To:

GET TOGETHER DEPT., RAILWAY AGE
30 Church St. • New York 7, N. Y.

New Fourth Edition
THE TRAFFIC DICTIONARY



By GEORGE T. STUFFLEBEAM
Manager, Transportation Research, Remington-Rand

Enlarged and brought up to date this handbook contains 4,000 terms, phrases, code marks and abbreviations used in all branches of transportation. Terms used in warehousing, shipping documents, claim procedure and practice before the I.C.C. are included. Not only traffic managers but anyone concerned with shipping or traffic department work needs a copy of this standard reference.

320 pages, 4½ x 6, $3.75

SENT ON TEN DAYS' APPROVAL

Simmons-Boardman Publishing Corporation
30 Church Street, New York 7, N. Y.

Please send me a copy of the new edition of Stufflebeam's TRAFFIC DICTIONARY, on Ten Days' Approval. If satisfactory I will remit the list price of $3.75; otherwise I will return the book.

Name .....

Address .....

City ..... Zone..... State.....

(This offer is limited to retail customers in the United States) R.A. 4-2-51

THE BALTIMORE AND OHIO RAILROAD COMPANY

SUMMARY OF 1950 ANNUAL REPORT

Income:	Year 1950	Increase over 1949
From transportation of freight, passengers, mail, express, etc.	$402,541,896	$45,833,879
From other sources—interest, dividends, rents, etc.	8,686,657	1,619,020
Total Income	$411,228,553	$47,452,899
Expenditures:		
Payrolls, materials, fuel, services and taxes	$360,550,650	$38,655,126
Interest, rents and miscellaneous services	35,640,823	630,520
Total Expenditures	$396,191,473	$39,285,646
Net Income:		
For improvements, sinking funds, and other purposes	$15,037,080	$8,167,253

Developments following outbreak of war in Korea caused industrial production to rise. As a result freight revenue was $39,922,583 more than in 1949. Passanger revenue increased $362,611 over 1949, due largely to military personnel moving in sleeping cars.

Operating expences in 1950 were $31,218,294 higher than in 1949 because of larger traffic volume and increased expenditures for maintenance.

The return on net investment of the Company in property devoted to public transportation was 3.38%—an improvement of 0.61 points over 1949.

Major improvements undertaken during 1950 included the new Import Ore Pier at Baltimore, Md., new double track tunnel on the main line between Grafton and Clarksburg, W. Va., and Centralized Traffic Control between Grafton and Parkersburg, W. Va. 174 additional Diesel locomotive units, 13 new sleeping cars, 2 Diesel rail motor cars, and 10 motor coaches were acquired.

A dividend of $4.00 per share was declared on the Company's Preferred stock November 20, 1950, payable December 22, 1950, to stockholders of record December 1, 1950. It was the first full dividend declared on the Preferred stock for any year since 1931.

Outstanding System interest-bearing debt, including equipment obligations, was reduced $6,275,063 during 1950. In the period 1941-1950 System debt was reduced $92,118,763.

R. B. WHITE, *President*

Advertisers

IN THIS ISSUE

A

Aluminum Company of America 10
American Creosoting Company, Incorporated 24
American Locomotive Company 12, 13
American Steel Foundries 105
Atchison, Topeka and Santa Fe 95
Atlantic Coast Line Railroad.. 83

B

Baker-Raulang Company, The, Baker Industrial Truck Division 11
Baltimore & Ohio Railroad ..87, 113
Barco Manufacturing Co. 26
Bethlehem Steel Company 18
Buffalo Brake Beam Co. 2

C

Central of Georgia Railway .. 97
Chesapeake and Ohio Railway.. 92
Chicago, Indianapolis and Louisville Railway Company 77
Chicago, Milwaukee, St. Paul and Pacific Railroad 98
Classified Department 112
Combustion Engineering-Superheater Inc. 67

D

Dednox Incorporated 100
du Pont de Nemours & Co. (Inc.) E. I. 115

E

Electric Storage Battery Company, The 22, 23
Electro-Motive Division, General Motors Corporation ...32, 33
Erie Railroad 79

G

General American Transportation Corporation 36
General Electric Company ...12, 13
General Railway Signal Company .....Back Cover
General Steel Castings 29
Gits Molding Corporation 111
Graham Tie Dowel Service Co. 104
Greenheart & Wallaba Timber Co., Inc. 112

H

Hulson Co. 15
Hyman-Michaels Company 113

I

Illinois Central Railroad, The.. 75
Iron & Steel Products, Inc. 112

K

Kansas City Southern Lines .. 71
Karpen & Bros. S. 107
Kinnear Mfg. Co., The 106

L

Lackawanna Railroad 73
Luminator, Inc. 21

M

Matisa Equipment Corp., The.. 34
McDougall-Butler Co., Inc. ... 111
Milwaukee Road, The 98
Miner Inc., W. H. 3
Minneapolis & St. Louis Railway, The 99
Missouri-Kansas-Texas Railroad 89
Missouri Pacific Lines 69
Monon Line 77

N

National Malleable and Steel Castings Company 16, 17
National Pneumatic Co., Inc. .. 30
New York Air Brake Company, The 14
New York Central System 90
New York, New Haven & Hartford Railroad 96

P

Pittsburgh Steel Products Company 35
Pressed Steel Car Company, Inc. 8, 9
Pullman-Standard Car Manufacturing Company 102, 103
Punch-Lok Company 111

R

Railway Educational Bureau, The 112
Railway Maintenance Corp. .. 19
Rock Island Lines 93
Ryerson & Son, Inc., Joseph T. 31

S

Scullin Steel Co. 27
Seaboard Air Line Railroad .. 81
Sherwin-Williams Co., The .. 25
Simmons-Boardman Publishing Company 113
Southern Railway System 85
Standard Car Truck Company 20
Superheater Inc.-Combustion Engineering 67

U

Union Asbestos and Rubber Company 28
Union Pacific Railroad 111
Union Switch & Signal Company 6

W

Waugh Equipment Company.. 101
Westinghouse Air Brake Co. .. 4
Willson Products, Inc. 110

Y

Youngstown Steel Door Company .....Front Cover

If YOU were a shipper, which line would impress YOU most?

—Chances are you would be impressed by the line with brightly finished freight cars that have that out-in-front look. For more than you may realize, cars with a well-groomed appearance impress prospective shippers . . . reflect your sound, progressive management. And in many sections of the country, this is your chief means of keeping your company name before the public.

That's why today more and more railroad men are turning to Du Pont DULUX Railroad Finishes for their freight equipment. They know that DULUX gives lasting service . . . retains high initial gloss for months despite smoke, fumes, cinders, hard knocks and weathering . . . reduces maintenance costs. DULUX comes in a wide range of distinctive colors that give your line sure-fire identification.

So boost your public relations . . . increase your freight traffic with eye-catching Du Pont DULUX Railroad Finishes. E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Del.

85% of America's leading railways* use DUCO lacquer or DULUX enamel on passenger-train equipment.

. . . conclusive proof that the nation's railroads depend on the exceptional qualities of Du Pont DUCO and DULUX Railroad Finishes: outstanding durability and sparkling beauty with a minimum of maintenance.

**Includes Class 1 lines operating 100 or more passenger-train cars.*

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DUCO · DULUX
REG. U. S. PAT. OFF. REG. U. S. PAT. OFF.
Railroad Finishes

Finish Facts from Du Pont

The new 20th Century Limited keeps its luxury look with a Dulux-finished exterior

SINCE 1902, the New York Central's 20th Century Limited trains have stood for the utmost in luxury travel. Like the 20th Century trains of the past, the two "Centuries" presently operating between New York and Chicago are the favorites of the "Who's Who" of business, politics, screen and stage.

To maintain the sleek exterior appearance traditionally associated with The Century, Du Pont DULUX color coats were applied over DULUX Primer Putty, Surfacer and Glaze. The DULUX-enameled band running the length of the train helps give The Century its distinctive look.

DULUX dries quickly to a high gloss without polishing. It retains its color and brilliance over long periods despite severe weathering and repeated washings.

New York Central is one of many railroads that operate "name" trains that are finished with Du Pont DULUX and DUCO Railroad Finishes. As railroad men have found through the years—you can depend on Du Pont for *better* finishes!

With G-R-S AUTOMATIC SWITCHING

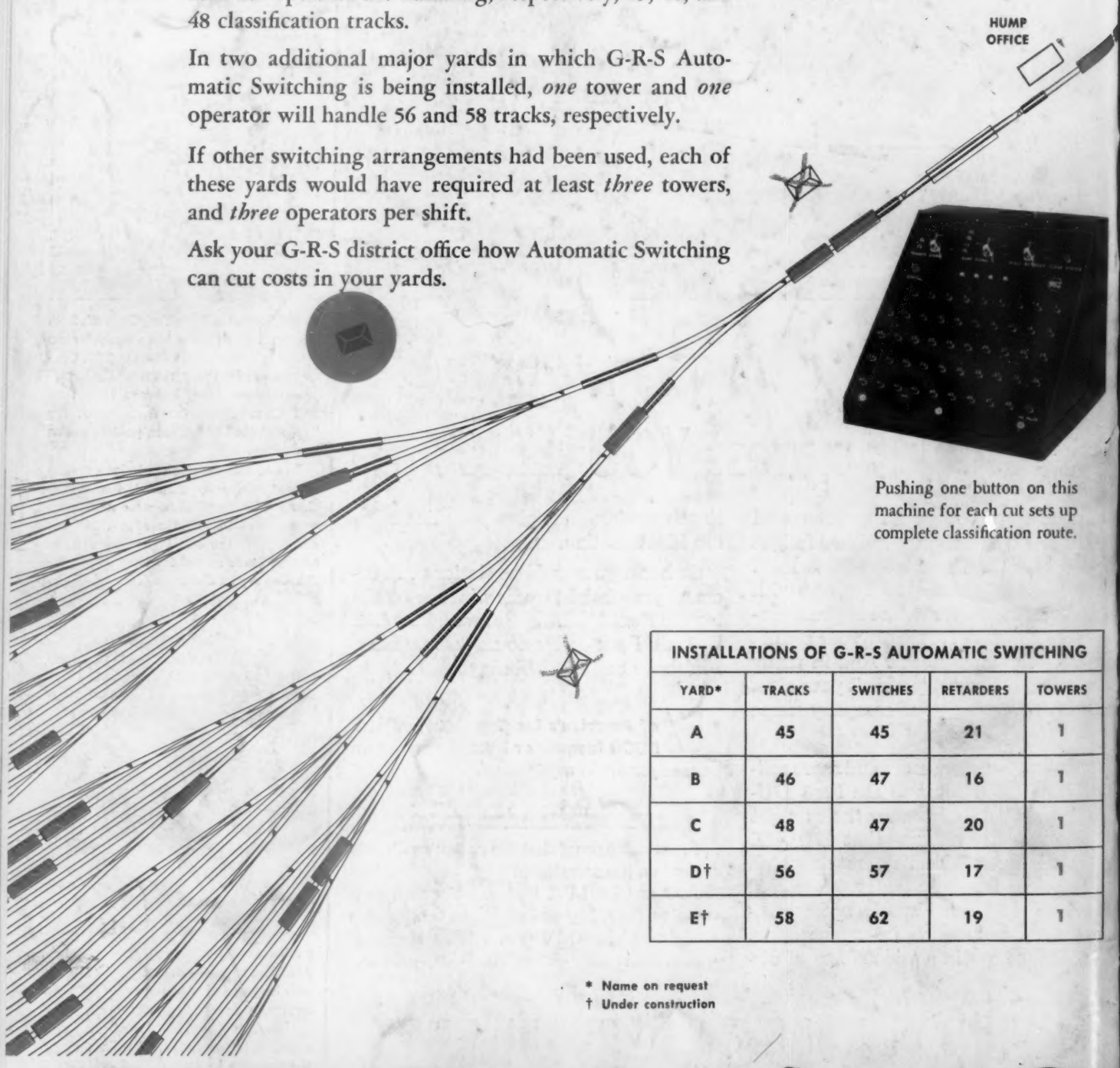
1 TOWER DOES THE WORK OF 3

In three large yards now equipped with G-R-S Retarder Systems and Automatic Switching, *one* tower and *one* retarder operator are handling, respectively, 45, 46, and 48 classification tracks.

In two additional major yards in which G-R-S Automatic Switching is being installed, *one* tower and *one* operator will handle 56 and 58 tracks, respectively.

If other switching arrangements had been used, each of these yards would have required at least *three* towers, and *three* operators per shift.

Ask your G-R-S district office how Automatic Switching can cut costs in your yards.



Pushing one button on this machine for each cut sets up complete classification route.

INSTALLATIONS OF G-R-S AUTOMATIC SWITCHING				
YARD*	TRACKS	SWITCHES	RETARDERS	TOWERS
A	45	45	21	1
B	46	47	16	1
C	48	47	20	1
D†	56	57	17	1
E†	58	62	19	1

* Name on request
† Under construction

GENERAL RAILWAY SIGNAL COMPANY

New York 17 Chicago 3 ROCHESTER 2, N.Y. St. Louis 1 A-2502